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Address

THE NATURE AND CAUSES OF ECZEMA.

CHAIRMAN'S ADDRESS BEFORE THE SECTION ON CUTANEOUS MEDICINE AND SURGERY OF THE AMERICAN MEDICAL ASSOCIATION, CHICAGO, JUNE 2-5, 1908.

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PHILADELPHIA.

Although eczema is of perennial interest to the dermatologist, it is not without some misgiving that I bring so trite and hackneyed a subject before this Section, and more especially since I have nothing novel to present. But there are so many and such great gaps in our knowledge of the essential nature and real causes of this many-sided affection that individual views, especially when based on experience, must always have more or less interest for those who are in daily contact with the many problems presented by this the most frequent of skin affections. As a measure of how much (or how little) we have learned in a century concerning the causes of eczema, it will be interesting to review briefly the various opinions which have been put forward by those who, with patient, earnest toil, laid deep and strong the foundations on which has been erected the splendid structure of modern dermatology, comparing them with those of the present day.

HISTORICAL CONSIDERATIONS.

Thomas Bateman in "A Practical Synopsis of Cutaneous Diseases," published in 1815, defines eczema as "a noncontagious eruption, generally the effect of irritation whether internally or externally applied, occasionally produced by a great variety of irritants in persons whose skin is constitutionally very irritable." Rayer, writing a few years later, described eczema as a noncontagious inflammation of the skin, and further stated that "our inability in a multitude of cases to discover any evident or even probable cause leads us forcibly to conclude that eczema is most generally evolved and kept up by hidden alterations of the fluids and solids"; but he made no attempt to define what these alterations were.

Devergie began the consideration of the causes of eczema by saying that "If one can not inherit an eczematous affection one may at least inherit the organization which favors its development," and he continued: "But eczema can spring from a host of different causes and it must be said that it is one of the maladies for which the predisposing cause, that which keeps up and perpetuates the cutaneous affection is most frequently unknown; . . . the determining causes are often readily found, but the predisposing causes are determined with difficulty. Not in ten cases in one hundred will the real cause of the affection be found sufficiently clearly indicated so that one may direct treatment against it."

If now we turn for a moment from the French school and return to England we find Erasmus Wilson, who so long deservedly occupied a commanding position in the field of dermatology, declaring: "The essential cause of eczema is debility, debility of constitution or general debility, and debility of tissue or local debility," the former presenting three forms, namely, assimilative, nutritive and nervous debility. He believed general debility by far the most frequent cause of this disease (278 out of 300 cases).

THE CONTRIBUTIONS OF HEBRA.

Among all those who have contributed to the building up of modern dermatology Ferdinand Hebra occupies easily the first place. Refusing to be bound by tradition and authority, with true scientific spirit always subordinating mere theory to observed facts, he greatly simplified the entire subject of eczema, doing away with the cumbersome and complicated classification of his predecessors, demonstrating "that certain affections of the skin hitherto described under different names must be regarded as only parts of one and the same disease, namely, eczema."

His conception, too, of the nature of this disease differed decidedly from those who had previously written about it. He regarded it as an inflammation of the skin which differed in no respect in essential features from inflammations of the same tissue arising from contact with irritants. For him the inflammation following the application of croton oil was just as much eczema as that which arose from some unknown or hypothetical cause. Heredity, which Hardy regarded as among the first of all the predisposing causes, in Hebra's opinion played no part in the production of eczema.

He considered faulty innervation as the most important element in its production. Under his teaching local treatment assumed a place of importance which it had never held before, and a large number of the nauseous decoctions of more than doubtful usefulness which had been prescribed from time immemorial for the expulsion of some theoretic *materies morbi*, "some peccant matter in the blood," were cast into the limbo of forgetfulness. Not that he denied the utility of internal treatment, but he clearly showed that in many instances local treatment was quite capable of bringing about a recovery to which internal remedies contributed nothing.

MORE RECENT STUDIES.

Let us now consider for a moment some of the views to be found in the most recent treatises. Crocker, while excluding from the category of eczema all inflammations of the skin due to strong irritants which act alike on the skins of all individuals, yet includes certain forms of dermatitis produced by substances which are irritants only to certain individuals. He regards an

exhausted nervous system as one of the most common factors in the production of eczema, but "foremost among all internal disorders" he places derangement of the alimentary canal. Concerning the parasitic nature of eczema, which has recently come to occupy a prominent place, his views are as follows: "While a limited number of cases of local dermatitis indistinguishable from eczema are parasitic, in most the dermatitis, however caused, only opens the door to parasites whose presence keeps up the local irritation."

In 1890 Unna put forward the theory that eczema should be ranked among the parasitic diseases, the active etiologic agent being a micro-organism which he named the *morococcus*, and still more recently he has reiterated his belief that the clinical phenomena of eczema may be best explained and understood if we accept its purely external parasitic origin. This theory has been by no means generally accepted in its entirety, although a fair number of authors have accepted it in modified form. Le Redde and Hallopeau likewise regard it as a parasitic malady occurring in subjects especially predisposed.

Stelwagon assigns chief importance among constitutional causes to gout, rheumatism and "digestive debility." In speaking of external causes he remarks very suggestively: "There are cases of eczema which are persistent owing to the fact that the external exciting cause remains unknown or unsuspected."

Hyde and Montgomery find that "eczematous affections may occur in individuals who are in every respect superb examples of good health, and are associated with every variety of systemic disease whose effect on the cutaneous malady is quite unknown"; they, too, find that eczema is associated most frequently "with defects in digestion, assimilation and excretion."

These brief abstracts from standard French, German and American treatises on diseases of the skin may be taken as representing the prevailing views concerning the nature of eczema and its chief causes, local and general.

OPINIONS AS TO ETIOLOGY.

There is a pretty general agreement among authors that eczema may arise from purely local causes, but there is considerable difference of opinion as to whether all of these local inflammations should properly be included in the category of eczema. I believe, however, that the dermatitis which arises from repeated or long-continued contact of the skin with some irritant substance is just as much eczema as the local inflammations which arise from unknown causes. For example, the entire group of so-called trade eczemas, such as occur so frequently on the hands and forearms of those who work in dye stuffs and other irritant chemicals, and which often persist for an indefinite period, even after the patient is no longer exposed to the original cause, are surely eczema in every sense of the term. They are no less eczema because they arise from well-known causes.

Much stress has been laid by authors, almost without exception, on a special predisposition as a necessary prerequisite for the production of eczema by local irritants, but in what this predisposition consists, if it exists, we are entirely ignorant. It seems to me that eczema may occur in any individual if the local irritation is prolonged or sufficiently often repeated. Indeed, we have abundant evidence of this in many cases of the trade eczemas already alluded to in which the inflammation of the skin appears only after a shorter or longer period of immunity.

I recall the case of a distinguished teacher in one of our medical schools who, after having employed solutions of formaldehyd for several years for the preservation of his anatomic specimens without the slightest deleterious effect, began to suffer from a patchy vesicular eruption on the hands, presenting all the clinical features of eczema. His general health, which was always excellent, had undergone no perceptible alteration in the meantime. The skin having once become inflamed recurrences take place with ever increasing facility. In the case just quoted the patient had exposed his hands to the action of solutions of formaldehyd for two or more years without exciting inflammation, but when once a dermatitis had occurred the sensitiveness of his skin was so greatly increased that merely entering a room where a small quantity of formaldehyd vapor was present was sufficient to bring on a sharp attack of eczema. McCall Anderson has aptly remarked that the skin, like other portions of the economy, contracts bad habits, and having once contracted them often gives them up with great reluctance. As a matter of course the period of immunity varies greatly with the individual, one contracting an eczema very speedily, another only after repeated or prolonged exposures.

UNSUSPECTED CAUSES.

In many cases of local eczema, in which, owing to limitation of the eruption to exposed parts, or for other more or less obvious reasons, we are convinced of its external origin, it is frequently a matter of the utmost difficulty to detect the exciting cause owing to its often unsuspected nature. I have within the past two or three years seen two cases of eczema, both in women, situated on the sides of the face and neck, in which the eruption had been present for two or three winters, beginning with the appearance of cold weather and disappearing in the spring. In both cases there was nothing in the appearance of the disease to suggest that the inflammation was anything else than an erythemato-vesicular eczema of the ordinary type. There were patches of small vesicles seated on an erythematous base which were followed by oozing and crusting and accompanied by itching and burning. After observing the cases for some time it was discovered that the disease had in each instance appeared after the wearing of a new fur boa; with the abandonment of this particular piece of fur the disease disappeared permanently under simple local treatment. Cases like this are by no means the exception, indeed they are so common as to be within the experience of every one, and I am quite convinced that we should do well not to accept an internal cause for cases of localized eczema until we are able to absolutely exclude external causes.

While I am far from prepared to accept the theory of the parasitic origin of eczema, I am yet quite willing to accord to micro-organisms an important rôle in this disease. I think there can be no doubt that in many instances an acute dermatitis arising from some simple inflammation of the skin is transformed into a chronic eczema by secondary infection by some one of the many varieties of the micro-organisms which flourish so abundantly on the skin. Strong presumptive evidence in support of such a view is afforded by the fact that such local remedies as tar, ammoniated mercury, resorcin and other substances possessing more or less active parasiticide properties often are of great service in local eczemas.

INTERNAL CAUSES OF ECZEMA.

When we turn from the external causes of eczema to a consideration of its internal causes we immediately leave the well-beaten road of ascertained fact to enter a wilderness of speculation and hypothesis. It is not my purpose to enter into a detailed consideration of the internal causation of eczema, but it may not be without interest to examine briefly a few of the most generally accepted internal causes, belief in which seems frequently to have no better foundation than the shifting sands of theory, which in turn is based too often on insufficient or faulty observation. Among these, especially in infantile eczema, so-called dyspepsia, and digestive troubles of various kinds occupy the first place; but I think it may well be doubted whether these deserve this evil preëminence.

A half century ago Devergie observed that many patients with eczema were examples of perfect general health, and that frequently, if they had suffered previously from indigestion, they were free from it while they had their eczema. Unna never regulates the diet of infants with eczema since he has observed that in those cases accompanied by lowered nutrition, there is improvement in nutrition and consequent increase in weight as soon as the eczema has been healed by external remedies. A most illuminating paper in this connection is one published by Hall.[1] This observer in a series of cases of infantile eczema, some 60 in number, found that in most of them no disturbance of digestion preceded or accompanied the first appearance of the eruption, nor were there any symptoms of indigestion throughout the course of the disease. In most of the cases the patients were breast-fed and, therefore, not exposed to the indigestion arising from improper feeding, and only a small percentage of the cases occurred in the summer months, when, as is well known, infantile indigestion is most common. My own experience corresponds perfectly with that of Hall. Some of the worst cases of infantile eczema I have ever had under my care occurred in infants in whom it was impossible to detect any evidence of indigestion and who were perfect examples of vigorous, healthy babyhood.

There is a widely prevalent and deeply rooted notion that excrementitious matters circulating in the blood, especially those which pass out of the body by way of the kidneys, acting as irritants to the skin are frequent causes of eczema. If this notion were correct eczema should be a frequent complication of such diseases as chronic interstitial nephritis in which the output of waste through the kidneys is frequently reduced to its lowest expression and the blood in consequence is charged with an enormous amount of toxic substances which are often excreted vicariously through the skin to a greater or less extent. Under such circumstances the conditions should be especially favorable to the production of cutaneous inflammation; but eczema, instead of being a frequent complication of chronic nephritis, is quite infrequently associated with this affection. I have seen a considerable number of cases of nephritis and many cases of eczema, but I believe I do not exaggerate when I say that I can readily count on the fingers of both hands the instances in which I have seen these two diseases associated.

Rheumatism and gout figure largely in most lists of the internal causes of eczema, but I do not hesitate a moment to declare that in my opinion the former plays no part in the causation of this disease. As to gout, while I would not deny its influences as a causative factor, I believe its importance much exaggerated.

Now I would not be understood as denying that eczema may arise from causes within the body; on the contrary I believe that it does so arise in a considerable proportion of cases, but I must also confess I believe that a much larger proportion is due to external irritants. What I wish to emphasize is that our knowledge of the internal causes is extremely shadowy and ill-defined, seldom sufficiently accurate to afford a rational basis for internal treatment. All of us have seen patients with eczema get well many times under local treatment alone, but few of us, I venture to say, would expect very satisfactory results from internal treatment alone.

I am well aware that much of the foregoing must seem to many, if not most of you, as rankest heresy, but *"Hier steh' ich; ich kann nicht anders."*

Advance in knowledge comes only with conviction of ignorance; we shall never know anything worth while about the internal causes of this, the commonest disease of the skin, until we are honest with ourselves and admit the insufficiency of our knowledge; until we cease to repeat the meaningless generalities about internal causes with which our textbooks have been filled for a hundred years. *"En médecine plus qu'en toute autre science, il faut être vrai, il faut être consciencieux; c'est pour le médecin qui écrit le plus impérieux de tous les devoirs."*—Devergie.

ABSTRACT OF DISCUSSION.

DR. JOSEPH ZEISLER, Chicago: I do not entirely agree with Dr. Hartzell, but it has an exhilarating effect on me to find that an American dermatologist to-day stands on the ground occupied by me for many years under the influence of the teaching of Hebra and Kaposi. I have somewhat modified my views in regard to the nature and causes of eczema. Twenty years ago I would have been ready to subscribe to every word said here to-day, but since then my views have undergone a change, and I can no longer afford to look on eczema as a local matter entirely; nor would I feel that I had done my full duty, if called on to treat a child suffering from eczema, if I limited myself to external remedies, to the neglect of internal treatment and a proper investigation and regulation of the diet. I have come to look on rheumatism and gout as very frequent and important etiologic factors in eczema, and I regard the so-called nervous eczema as anything but local in character.

DR. GROVER W. WENDE, Buffalo: I am fully in sympathy with Dr. Hartzell's views on the subject, and the method of treatment suggested by him.

DR. WILLIAM THOMAS CORLETT, Cleveland: In the main I agree with Dr. Hartzell, but, while I regard eczema as mainly a local disease, or, in other words, a condition of the skin which may be induced at times by local agencies, yet in infants gastrointestinal derangements frequently accompany the disease. It has also been my experience that the cutaneous disturbance will not yield satisfactory to local measures until the digestive tract has received attention. In most cases, aside from local measures, the selection of a suitable dietary, according to the age and other peculiarities of the child, is all that is required. So frequently has this association been encountered and so frequently has the latter observation been confirmed that I can but regard the internal disturbance as an etiologic factor in the causation of infantile eczema. That this is always the case I do not assert, as the delicate skin of the infant readily responds to local irritation. In treating eczema in general, while I do not go as far as Dr. Zeisler in the use of internal remedies—for I have seldom found them of benefit—I do believe that much may be accomplished in suitable cases by what is vaguely expressed as attention to the general health of the patient.

1. British Jour. Dermatology, 1905, xvii.

DR. CHARLES J. WHITE, Boston: Although I have not made a particular study of eczema, I am inclined to agree with Dr. Zeisler rather than with Dr. Hartzell. The latter takes it for granted that, because we are ignorant of the internal causes of eczema, there can be none. On the other hand, he does find an external cause, and, therefore, assumes that all cases are due to external causes.

DR. WILLIAM A. PUSEY, Chicago: I am in accord with Dr. Hartzell's views, as I understand them. In my opinion, we must start with the proposition that eczema is not a definite disease. It is not a pathologic entity. Eczema is simply dermatitis—a reaction in the skin produced by irritation of various sorts, which may be both local and constitutional or either. As a simple dermatitis it may be produced by many causes, but as soon as we discover a specific form of dermatitis, like scabies or seborrheic dermatitis, we eliminate it from the group of conditions that we call eczema. The typical form of eczema in children is, I believe, due in great part to internal causes. On the other hand, there are certain forms of eczema that are due to external causes. And the form due to internal causes presents no essential differences from the form due to external causes. For example, I recall, in a woman, a typical case of eczema of the hands of several years' duration of the form that we usually see produced by some metabolic disturbance. This patient had consulted several eminent dermatologists and she herself ultimately discovered that the eruption was due to contact with primroses, which she was accustomed to care for.

DR. JOHN A. FORDYCE, New York: I agree in the main with Dr. Hartzell, whose views on this subject are somewhat similar to those expressed by me at the New Orleans meeting of this Section. The more I study eczema the more convinced I am that in the great majority of cases the causes of the disease are external. I teach my students that eczema is a reaction in the skin; that it is often impossible to differentiate the histologic features of a dermatitis produced by rhus or iodoform or by other chemical or mechanical irritants from a typical case of eczema in which we are unable to find the etiologic factor. We know that certain external agents will produce eczema. We theorize and say that certain internal causes may produce it, but we can not prove it. As a predisposing factor, we know that certain skins will respond to irritants, just as some mucous membranes are predisposed to catarrhal affections. My opinion is that eczema is a reaction generally produced by irritants from without in individuals with a skin that is predisposed. In exceptional cases the irritant may come from within.

DR. HENRY C. BAUM, Syracuse: My first impression of eczema, obtained in Kaposi's clinic, was that it was a reaction of the skin due to external causes. I am convinced now that in any case of so-called eczema an external cause is operating, as Dr. Fordyce said, on a susceptible skin. This susceptibility is very frequently capable of demonstration as emanating from a constitutional cause. Take, for example, a case of infantile eczema in a breast-fed baby whose mother is constipated, nervous and run down. If we put the mother in a better state of health we can often cure the eczema without any treatment directed to the child. We know that some patients with eczema are made worse by an injudicious diet. Eczema may be due to both external and internal causes; otherwise we should have no explanation to offer for an external cause producing eczema in one individual and not in another. The classification and demonstration of the causes of eczema is not always as difficult as one might believe. For instance, I have observed many severe cases which were associated with indicanuria; the eczema disappeared promptly after the disappearance of the indicanuria. Hyperacidity is also frequently associated with eczema, and the alkalies are very useful as adjuvants in the treatment of such patients. If I were deprived of the advantages of constitutional treatment for my patients with eczema, I should feel much handicapped. I believe, as we all do, that the specific cause of eczema can oftentimes be demonstrated as external, but that in other cases it possesses constitutional features.

DR. M. B. HARTZELL, Philadelphia: I do not deny that eczemas may arise from internal causes, but I must repeat that I believe those of internal origin constitute a minority of the cases. The classification of these eruptions is somewhat after this fashion: If we know the irritant which produces the eruption, we call the latter a dermatitis; if we do not know it, we call it an eczema. We have not learned a single thing about the internal causes of eczema during the past century. Listen again to this quotation from Thomas Bateman. He defines eczema as "a non-contagious eruption, generally the effect of an irritant, whether externally or internally applied, but occasionally produced by a great variety of irritants in persons whose skin is constitutionally very irritable." This was written nearly one hundred years ago, and I do not think any one present to-day can improve on this definition. I have known of cases of eczema treated for a long time by a great variety of internal remedies, in which subsequently the eczema was shown to be due to an external irritant, precisely as in the case of primrose poisoning cited by Dr. Pusey. I still believe that most eczemas are of external origin, and that we know little about the internal causes.

Original Articles

RELATION OF PHARMACY TO MEDICINE.*

JOSEPH P. REMINGTON, PH.M.
PHILADELPHIA.

The cordial relations existing between the two national bodies, the American Pharmaceutical Association and the American Medical Association, have been continued for many years, and in presenting this address, on behalf of the delegation, I am expected to review, briefly, the present situation of pharmacy in its relation to medicine.

Never before in the history of the two associations has the outlook been so promising, not only for the continuance of cooperation, but we are at last beginning to get results. The establishment of branches of the American Pharmaceutical Association in various cities and large centers has added greatly to the influence and usefulness of the parent body.

What is known as the "propaganda" for circulating information among the medical and pharmaceutical professions about the U. S. Pharmacopeia and National Formulary preparations has spread during the last year, notwithstanding the opposition of those interested in proprietary and special preparations, who predicted the failure of the "propaganda." The work is going on; it is essentially a work of education. Commercialism, in its various forms, good and bad, has dominated therapeutics, and while I do not join in the hue and cry against manufacturers of specialties (for this is a legitimate business), I do take issue with the medical profession for allowing itself, with a few exceptions, to depend on the specialty men for their knowledge of therapeutics. The members of this section have often heard statements of this kind, and it seems like an old story; but it is only through constant repetition and a firm adherence to the principles, so often enunciated, that progress is being made.

Patient and persevering effort, all along the line throughout the country, is bringing results. The old method of attacking the sins and the sinners in both professions has proved a failure, and it always will. The church and the state have suffered, and progress has been impeded by pessimism and the efforts of those whose pecuniary interests are affected and who have motives

* Read as delegate from the American Pharmaceutical Association to the Section on Pharmacology and Therapeutics of the American Medical Association, at the Fifty-ninth Annual Session, held at Chicago, June, 1908.

for excusing or defending what they believe to be their interests by attacking the earnest efforts of disinterested men who believe in the highest ethical ideals to elevate both professions and who stand for the greatest benefit to the greatest number. How often men refuse to go to church, saying "There is a man who goes to church every week, but I am a better man than he is." And so in the affairs of state, "There is a man who is mayor or governor, and everybody knows he is unfit, I wouldn't do what he does for any amount of money." Such men sit down and drop their hands idly, satisfying any twinges of conscience by wrapping themselves up in a mantle of self-righteousness. Is it not better to accept, in our time and generation, our fellow-men as they are, and patiently and persistently, but kindly, set before them a more excellent way?

This is now the policy which pervades the earnest efforts to increase the influence of the "propaganda." Let us admit freely, that in both professions there are individual members who are unworthy, but why dwell on the sins and sinners; why not set before them a way of escape? Condemnation, even if it is just, is worthless, unless something better is put in the hands of the ignorant or careless; indeed, it is a most difficult task, at present, to arouse the interest of good men in both professions, in some quarters. The first principles of ethics must be explained, and even when these are accepted with enthusiasm the convert must be bombarded with literature and often personal effort to keep him long enough in the new way until he can see the results, which come from the use of definite preparations, fully up to the pharmacopeial standards.

In the pharmaceutical ranks there is also much work to be done. Physicians complain that there is yet ignorance, on the part of the pharmacist, about preparations of the Pharmacopeia and National Formulary, and that they can not get, promptly, what they order or prescribe. While this is natural, under the circumstances, it is to be deprecated, and there is no excuse to offer, but it is a condition which is being rapidly remedied. The work of the American Medical Association, in providing a manual of Pharmacopeial and National Formulary preparations in a convenient form for consultation, has been a wise step in educating physicians. If every physician in the country would promise to use such of these preparations as he can, without at once forsaking entirely the specialties that he has been using, the most practical beginning will have been made; common sense would plainly indicate such a course. And again, as we are starting to revive prescription-writing at its best, the old relation, which has been largely abandoned of late years, of the physician calling on the pharmacist in his neighborhood and asking to be shown the newer preparations which are ethical, must lead to more useful results than the prescribing of a ready-made remedy, which probably has been tried already by the patient, with unsuccessful results.

In conclusion, the American Pharmaceutical Association presents to this body its greetings, and offers to cooperate with the American Medical Association and this section in every effort to advance ethical pharmacy and rational therapeutics; and, in this way, it is believed that the tide of "therapeutic nihilism," which is fast waning, will have been turned backward, and the medical profession, while keenly alive to every improvement in the armamentarium, will soon be placed on a solid foundation of truth.

OPHTHALMOLOGY FOR GENERAL PRACTITIONERS.*

LEARTUS CONNOR, A.M., M.D.
DETROIT.

DEFINITION.

General practice does something for every class of cases; special practice everything for a single class. General practice ophthalmology should harmonize with other college courses and meet the needs of the family physician; special ophthalmology supplements college courses and family practice. General practice is a large load drawn slowly by many horses; special practice a light load drawn swiftly by a single horse. General practice is extensive farming; special, intensive. For convenience of discussion we shall call "the ophthalmology for students of general practice" "general practice ophthalmology," as contrasted with "special ophthalmology."

STANDPOINTS OF STUDY.

"General practice ophthalmology" may be studied from many standpoints: Its relation to other college courses; to other kinds of family practice; to the entire field of medicine; the needs of the laity; and to special ophthalmology.

1. *Relations of General Practice Ophthalmology to Other College Courses.*—Respecting these courses, it is to be noted that the last half century has projected into medicine many radical discoveries and revolutionary inventions along fundamental lines. Instruments of precision, laboratory work, antiseptic methods, new sera, have introduced a possible exactness before undreamed of. Prior to this epoch one teacher was responsible for an entire course; so the mastery of his lectures was the mastery of his course. Such mastery equipped the young practitioner for his life work, giving definite ideas on which to begin the management of his first cases—ideas that were the result of his teacher's long study and active practice, and so worthy of confidence. With increased material and the introduction of laboratory and clinical methods, many teachers were needed in each course. The results were easy to see, as "too many cooks spoil the broth." Confused by conflicting instructions, on meeting his first serious case the young doctor often hesitates, and another is substituted.

The number, length and quality of college courses vary; in Cornell there are twelve general and thirteen special courses, ophthalmology getting ten lectures and twelve hours of section work, being classed as a minor subject. Doubtless Cornell, with other leading colleges, is struggling to so proportion and harmonize these twenty-five courses that they shall afford the student the best chance to become a first-class family physician.

A study of all American medical college announcements as related to their "ophthalmology for students of general practice" showed:

1. An utter lack of uniform requirement in hours of study, subjects studied or amounts of such study, in clinics, recitations or demonstrations.

2. Such a mixture of general practice ophthalmology with special as is confusing to both general and special students.

3. Not one institution made clear what the student must know and be able to do. Surely the student of

*Read before the American Academy of Ophthalmology and Oto-Laryngology.

"general practice ophthalmology" has our sympathy in his endeavor to learn from college announcements the nature and extent of the job before him. The situation is the more distracting, as like conditions exist in each of the twenty-five or more courses. Since each course is a selection from a vast pile of settled facts, it is fair to expect the selector to give the student a list of the subjects selected, with the amount of each.

A short time ago, at the meeting of a Michigan county medical society, a poll was taken of the members relative to the instruction they had received in ophthalmology. Not one had heard a lecture on refraction, much less been taught to refract; all had seen plenty of eye operations (but none had ever operated); a few of their eye cases went to the special ophthalmologist, but most to the opticians. In all large towns opticians practice ophthalmology; in the country traveling opticians live on neglected cases of refraction. Over the same area are cases of blindness from eye infections which family physicians failed to treat wisely. Surely, something must be defective in the training of family physicians, that so generally they are unqualified to occupy this neglected field of medicine.

Evidently the time and energies of the average medical student are fully occupied with existing courses, so that if he is to be better trained in general practice ophthalmology a new deal must be made. What shall this be? Time forbids an answer now, but we may inquire:

1. Is the time allotted each college course such as to produce the best family physician?

2. How much of each course is inaccurate, misleading, untrue or simple padding?

3. What part of the course on ophthalmology has any fitness for the working needs of the family physician? I have a strong conviction that were all college courses free from chaff and full of good wheat, there would be plenty of time and energy for a general practice ophthalmology adequate to enable the family physician to treat cases neglected or now in the hands of the opticians.

An important factor in the working value of a medical course is the teacher. If he has learned the art of teaching as well as the art of medicine, he can so systematize his subject and stimulate the student that far more can be accomplished within a given period. That a doctor should acquire the art of teaching by practicing on students is quite as bad as a layman learning the art of medicine by practicing on the sick. General practice ophthalmology needs men trained both in medicine and pedagogy to furnish students the best college course and give family doctors a fair show in actual practice.

2. *The Relations of General Practice Ophthalmology to Other Kinds of Family Practice.*—The family physician does team work; side by side with ophthalmology are dermatology, obstetrics, gynecology, laryngology and other classes of practice—all limited, as is ophthalmology. He finds that his ophthalmology helps his internal medicine, his neurology, his obstetrics and every other class of cases; in return, every class of cases helps his ophthalmology. He comes to realize, as a simple specialist can not, the helpfulness of one class of practice to another, and to all combined. Thus, the student's failure to master general practice ophthalmology mars the harmony of his education and unbalances his practice, as does the lack of one horse from a team cripple its power.

3. *The Relations of General Practice Ophthalmology to the Entire Field of Medicine.*—Already we have noted the fact that because the family physician lacked adequate equipment in ophthalmology, vast amounts of medical practice have been neglected by the profession and picked up by laymen, termed opticians; and many eyes are lost from unchecked infectious eye diseases. In these and allied ways general medicine has been discredited and impoverished, the family physician lost much in fees, prestige and mental quality.

4. *The Relations of General Practice to the Needs of the Laity.*—The laity need doctors when their eyes are disabled, and should be taught such habits as will restrict their disabilities to a minimum. In towns the "well to do" can secure the services of special ophthalmologists; the very poor seek relief at hospitals and dispensaries. Between these two extremes is a large class unwilling or unable to pay the special ophthalmologist and without the dispensary habit. This class is a large patron of opticians, though these persons have family physicians who ought to have trained them better. (Alas, the family physicians never were taught the situation, and so, too often, are allies of the optician, instead of their own specialists.)

For this grave situation (from a professional standpoint) the only remedy is a qualification of every family physician in general practice ophthalmology. In regions distant from towns conditions demand of the family physician an ability to care for all minor eye troubles and an obligation to place the major ones in the hands of a special ophthalmologist. The laity needs an all-round doctor all the time, a specialist occasionally.

5. The relations of "general practice ophthalmology" to "special" will prove satisfactory only when both parties have a general practice ophthalmology through which they may cooperate. This common knowledge will enable the family physician to detect ocular disabilities now unrecognized, treat the simpler and refer the rest to a specialist, with a promptness essential to the best results. As this custom prevails, eye practice now in the hands of opticians or neglected will come under the control of competent physicians. The specialist should render positive aid and encouragement to the family physician as he seeks to cultivate this unoccupied field.

The principles inherent in a general practice ophthalmology may be stated thus: (1) The several college courses should be proportioned on the basis of their value in making the best family physician, a task for college faculties, or, in their failure, for state licensing boards. (2) The materials for each course, didactic, clinical, demonstrative or laboratory, should be selected by the same standard. (3) Each course should be outlined with unmistakable exactness, so that the student may know definitely, at the beginning, what he must master, and how much. (4) As abundant facts exist to occupy every course; all else should be excluded, leaving all wheat but no chaff. (5) No teacher should advocate methods of practice, the use of remedies or operations unproved by his own experience as the best known. (6) So far as possible, students should have experience in each mode of practice, make the examination, direct the treatment, and (under the teacher) be responsible for the results. College courses conducted along these lines would enable the student of

general practice ophthalmology to perform an amount of high grade work paralyzing to his neighbor trained in a haphazard manner.

The subjects of a general practice ophthalmology will vary with the selector's training. That I might have the judgment of professional leaders, I mailed a circular letter to about a hundred special ophthalmologists, surgeons, professors of practice of medicine, neurologists and family physicians, asking two questions: (1) What, if any, knowledge of ophthalmology is essential for the best equipment of a general practitioner? (2) What classes of eye cases should he be prepared to treat? (For the prompt and courteous answers to these queries I cordially return thanks.) The replies may be grouped as follows:

A. Those who thought no general practitioner should treat an eye case, but send every one to a specialist.

B. Those who believe the family physician should be able to practice special ophthalmology and special everything else, do all eye operations, as well as operations in gynecology and general surgery.

C. The neurologists were strong on those points at which ophthalmology touched their work, holding that to those should be added an ability to manage eye infections, including iritis and differentiate glaucoma from iritis, etc.

D. Many believed the family physician should treat infectious eye diseases, diseases of the uveal tract, and make a correct diagnosis of optic neuritis.

E. Few believed the family physician should be able to recognize and treat cases of simple presbyopia, myopia and hyperopia.

With much hesitation I venture the following outline of the subjects I would group in general practice ophthalmology:

1. It would not include operations within the eyeball, or on the eye muscles, the treatment of muscular unbalance, or complicated cases of refraction.

2. It should qualify students to recognize and treat injuries of the eye, except foreign bodies within the eyeball, all infections of the eye, diseases of the uveal tract and simple presbyopia, simple myopia and simple hyperopia.

3. It would enable students to make a simple inspection of the eyes; to note the movement of the lids and eyeballs; the size of the pupils, absolute and relative, their motility and changes with intensity of light; the color of the iris, etc.; to take the visual fields roughly with fingers or blackboard, noting their size, shape and similarity in the two eyes; to note the tension of the eyeballs as compared with the tension of a known healthy eye; to have practice in everting the lids, and to be familiar with the appearance of the conjunctiva and adnexa.

4. It would practice students in simple refraction until they were familiar with methods and reasonably sure of their results. It would familiarize them with convex and concave glasses, both in the trial case and as sold in the shops, and the adjustment of frames to different faces. General practice ophthalmology would enable the student to differentiate the several forms of conjunctivitis; the varieties of iritis in their different stages; the several lid disorders; redness of the conjunctiva from a foreign body, from a conjunctivitis, keratitis or iritis; a dacryocystitis from either a chalazia or hordeolum when situated near the inner canthus; a corneal opacity from cataract; glaucoma from iritis, conjunctivitis or corneal ulcer.

In treatment, general practice ophthalmology will utilize laboratory findings in doubtful cases of infectious eye disease and apply the agents known to destroy the infection, such as silver salts in gonococcus infection, zinc sulphate in infection with the diplobacillus of Morax-Axenfeld; mercury ointments in blepharitis, plus correction of refraction defects; tincture of iodin in corneal ulcers; expression and antiseptics in trachoma; atropin with mercury or salicylates internally in iritis; eserin in glaucoma (till the case can reach a specialist); hot water locally in most cases of acute inflammatory disease and malnutrition. The family physician's knowledge of intestinal disorders will prove helpful in all these cases.

General practice ophthalmology will teach the student the use of the convex lens for oblique illumination; use of the foreign body spud; of the knife and scoop for the removal of chalazia; the use of the ophthalmoscope to recognize a normal fundus. It will teach the nature and effects of atropin, hematropin, euophthalmin, eserin, cocain, eucain, dionin, boric acid, yellow oxid of mercury ointment the silver salts, zinc sulphate, copper sulphate and hot water.

Assuming that "general practice ophthalmology" is necessary for the best interests of the profession, the people and the art of medicine, how may it be secured with least friction at the earliest date?

1. We need the widest publicity of existing conditions and an exhaustive study of the means for their betterment.

2. We must enlist the several state organizations in the education of family physicians for their enlarged sphere—the care of all the disabled. The Michigan State Medical Society has directed its council to take the matter up with the county societies and the State Board of Registration.

CONCLUSIONS.

1. General practice ophthalmology is all of ophthalmology the student can master without violence to other courses, and a family physician can practice in harmony with his work.

2. It includes four factors—the ability to recognize and treat eye injuries (except foreign bodies within the eyeball); the recognition and treatment of all eye infections and diseases of the uveal tract; the recognition and management of simple presbyopia, simple myopia and simple hyperopia.

3. The best interests of the profession and laity demand a mastery of general practice ophthalmology by every physician.

4. The medical college obstacles to this can be removed (1) by eliminating from every course all chaff; (2) by adjusting the proportion of courses to the actual needs of the family physician, and (3) by insisting that all the professors be trained in the art of pedagogy, as well as the art of medicine.

5. The machinery of state medical societies and the American Medical Association should be used to awaken the interest of licensed physicians and induce registration boards and medical colleges to place among their requirements a "general practice ophthalmology."

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Hernia of the Appendix.—W. B. DeGarmo, in the *Post-Graduate*, August, 1908, states that in hernia patients it is important to remember the possibility of the appendix being in the hernial sac instead of assuming that all the patient's discomfort is due to the hernia.

THE OCULAR REACTION TO TUBERCULIN.

WITH REPORT OF 202 CASES.

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PHILADELPHIA.

The necessity for the early recognition of tuberculosis was never more apparent than it is to-day. The difficulties attending the recognition of this affection in its incipiency are numerous, this being especially true of obscure lesions of the lymphatic glands, bones, joints, viscera and nervous system. Infection of these structures with the tubercle bacillus frequently gives rise to indefinite and ill-defined symptoms and signs which often leave us in great doubt as to the nature of the underlying pathologic process. With the introduction of refined methods of diagnosis we are able to arrive at earlier and more definite conclusions. The employment of tuberculin subcutaneously proved to be a valuable addition to our diagnostic armamentarium, but this use of tuberculin subcutaneously is attended with numerous objections and dangers which are too well known to require repetition at this time.

The simultaneous introduction of the ophthalmic test by Calmette[1] of Lille, France, and Wolf-Eisner[2] of Berlin gives promise of being a simpler and more accurate method of administering tuberculin for diagnostic purposes. The reports of recent investigators seem to confirm in general the claims made by the originators of this test. Too little work has yet been done to establish the exact status, limitations and dangers of the test. In the endeavor to add something to the sum total of our knowledge of this subject I applied this test to 202 hospital patients. The majority of patients selected were those presenting definite symptoms and signs of tuberculosis, so that the test could be compared with the clinical and bacteriologic findings.

CLINICAL OBSERVATIONS.

The results of my observations are as follows:

Condition.	Cases, No.	Positive.	Negative.
1. Pulmonary tuberculosis	120	106	14
2. Pulmonary tuberculosis (doubtful)	13	3	10
3. Apparently healthy persons	53	3	50
4. Enteric fever	11	6	5
5. Syphilis	5	0	5

It will be noted that fourteen cases of undoubted tuberculosis yielded a negative result. In six of these cases the pulmonary lesion was well healed and inactive. Of the remaining eight patients, three were moribund and two were suffering with acute miliary tuberculosis. Tuberculin in amounts varying from 1/1000 to 1 milligram was injected subcutaneously in the fourteen cases which yielded a negative result. In four cases it caused the development of the characteristic reaction in the eye, which had been subjected to the tuberculin instillation. The moribund patient and those with acute miliary tuberculosis failed to respond. In five of the cases which gave a positive reaction the employment of tuberculin subcutaneously seemed to aggravate the existing inflammation, but in none did it cause a reappearance of the inflammatory signs after they had abated.

It will be noted that in three of the doubtful cases there was a positive reaction, likewise in three apparently healthy individuals. These patients were subjected to a most searching examination, but in none could the presence of tuberculosis be detected.

Twenty-five of the apparently healthy individuals who gave a negative reaction were subjected to a second instillation in the same eye, and in eighteen there was a positive result. Some of the most severe reactions observed were obtained in this class of patients by a second instillation in the same eye. The cases which yielded a positive result were subjected to a third instillation in the other eye, with a negative result in each case. This experiment seems to prove that the state of anaphylaxis is not transferred to the other eye.

Five patients in whom the state of anaphylaxis was established by two instillations in the same eye were given 1/100 mg. of tuberculin subcutaneously. No constitutional symptoms followed, showing an absence of general hypersusceptibility.

Tuberculin, in amounts varying from 1/1000 mg. to 1 mg. was injected subcutaneously in fifteen of the healthy patients who gave a negative reaction. In none did it cause the development of the characteristic conjunctival inflammation.

Five of the six patients with enteric fever who gave a positive reaction were at an early period of convalescence; one was obtained during the active stage of the disease. Of the five patients who yielded a negative result, four received instillations during the third week of the disease, the remaining one during convalescence.

Regarding the occurrence of a positive reaction in typhoid, Calmette[3] suggests that "there may be some connection between the presence of a few tubercle bacilli in the mesenteric glands and the typhoid infection of these glands and thence of the entire organism by the typhoid bacillus, which is a normal inhabitant of the intestines in a number of healthy persons."

Cohn[4] believes that a specific hypersusceptibility to bacterial albumin in general is evolved in the course of typhoid fever, as well as to typhoid bacillus extracts in particular. Whatever may be the true explanation, the fact that a certain proportion of all typhoid patients react is well established.

The syphilitic patients, all of whom failed to react, were given instillations in the endeavor to determine if the other chronic infectious granulomata also responded to instillation of tuberculin. No cases of leprosy, actinomycosis or glanders being available, the occurrence of the reaction in these affections could not be determined.

PREPARATION EMPLOYED.

The tuberculin tablets which are so frequently employed are directed to be dissolved in sterile water; solution, however, can not be effected, the resulting preparation containing suspended insoluble particles, which gradually settle to the bottom. Care must be exercised to mix thoroughly before using, so as to be assured a uniform product. The suspended insoluble particles, in my opinion, are capable of exciting considerable irritation in susceptible conjunctiva. In this way pseudo-reactions may be produced. Calmette believes that the presence of glycerin or carbolic acid in the new or old tuberculin is sufficiently irritating to produce pseudo-reactions. MacLennan[5] apparently disproves this statement, as he instilled into many healthy eyes 1 per cent. solutions of glycerin and carbolic acid without producing a reaction.

1. Compt. rend. de l'Acad. d. sc., June 17, 1907.
2. Berl. klin Wchnschr., 1907, xliv, 709.
3. Bull. de l'Acad. de méd. de Paris, lxxii, 33-80.
4. Berl. klin. Wchnschr., xliv, 1499-153.
5. Brit. Med. Jour., Dec. 7, 1907.

I believe that as yet there is no definite method for standardizing tuberculin; therefore, we can not be assured of always employing a uniform and definite product.

Smithies and Walker,[6] in a recent paper, stated that the tuberculin they employed was a suspension of fragments of dead bacilli. I have examined several tuberculin preparations on the market and in none was I able to demonstrate the presence of bacilli or fragments of such. In my experiments I employed tuberculin solutions (?) of 0.5 and 1 per cent. The 0.5 per cent. solution gave the most satisfactory results and should be employed in nearly all cases. By so doing the possibility of securing violent reactions is reduced to a minimum. Normal salt solution was frequently employed to dissolve (?) the tuberculin. It is admirably adapted for this purpose and seems to be much less irritating than sterile water.

THE REACTION.

There seems to be a difference of opinion existing as to what constitutes a reaction. Calmette in his original contribution to this subject described the reaction as "a slight swelling and redness localized principally about the caruncle, the inner canthus and the conjunctiva." Auberet and Lafond[7] and Auberet and Magne[8] describe four degrees of reaction, depending on the severity of the inflammation. Their classification is cumbersome and serves no useful purpose. For recording reactions I employed the schema devised by Baldwin[9] and found it simple and convenient. His plan is as follows:

Negative.—No difference in color when lower lids are pulled down and compared.

Doubtful.—Slight difference with redness of caruncle.

\+ = Distinct palpebral redness with secretion.

\+ + = Ocular and palpebral redness with secretion well marked.

\+ + + = Deep injection of entire conjunctiva, with edema of lids, photophobia and secretion.

In the series of patients examined the average time of development of the reaction was about five hours. The earliest made its appearance in two and one-half hours; in two the reaction was delayed for nearly twenty-four hours. These so-called delayed reactions have been described by other writers. They may be due to faulty technic or to the fact that the instillations were made in the negative phase so that a response did not occur until the positive phase was established.

Several fleeting reactions were observed, in which very mild inflammatory signs appeared and disappeared in the course of twenty-four hours. These may be attributed to faulty technic, some of the tuberculin escaping, or to the patient deliberately removing the tuberculin from the eye. I am inclined to think that they are pseudoreactions, as most occurred in individuals free from tuberculosis.

The marked inflammatory signs in most cases abated in forty-eight hours, but in a few cases they persisted for seventy-two hours. The vascular engorgement, however, was distinctly visible in many cases one week after the instillations. Several violent reactions were observed, but these, I believe, can be avoided in most cases by employing tuberculin of proper strength.

The lack of uniform and definite standards for judging the occurrence of the reaction in all probability will account for some of the varying results of numerous observers. Recent writers on this subject seem to be of the opinion that the intensity of the reaction bears no relation to the extent of the disease. While this may be true in a general way, yet my experience shows that those individuals with small lesions and good resisting powers gave the most prompt and pronounced reactions.

The claim of Wolff-Eisner and Teichmann[10] that the intensity of the reaction has an important bearing on the prognosis seems to be confirmed by my observations. Those patients who were waging vigorous warfare against the invaders and apparently successfully combating the disease, always gave a prompt and vigorous reaction; while in those who were overwhelmed with the infection the reaction was slight or *nil*.

CONTRAINDICATIONS AND DANGERS.

Blepharitis, conjunctivitis, keratitis, trachoma, and iritis are all said to contraindicate the employment of this test. Eyestrain from errors of refraction need not prevent the application of the test. In the series of cases examined were several elderly individuals with a chronic hyperemic condition of the conjunctiva. The instillations served to aggravate the pre-existing inflammation in those patients who were tuberculous; no effect was apparent in non-tuberculous patients. Numerous reports of untoward effects following the instillation of tuberculin have appeared in the literature. Chief among these is catarrhal ulceration of the cornea, which ophthalmologists claim is often not apparent to an untrained observer. In the comparatively large number of patients whom I examined some severe reactions were observed, but in no instance did serious results follow the instillations.

TREATMENT OF THE CONJUNCTIVITIS.

The inflammation was rarely severe enough to demand active treatment. In the great majority of cases no treatment at all was instituted. In the more severe cases cold compresses were applied to the lids and the conjunctival sac cleansed frequently with a warm solution of boric acid. Solution of adrenalin chlorid (1 to 10,000) was employed in a few cases. These measures relieved the subjective symptoms, but apparently did not diminish materially the intensity or duration of the reaction.

TUBERCULOUS CASES WHICH FAIL TO REACT.

It has been the experience of numerous observers that cachectic, moribund and very advanced paients fail to react. This is also true of acute miliary tuberculosis and of cases in which the lesion is well healed and inactive. My experiments confirm in every particular the results of these investigators. It seems unreasonable to expect reactions to occur in advanced cases, any more than we could hope to obtain a response to the hypodermic administration of strychnin or other alkaloid. Fortunately in this class of cases the diagnosis is rarely in doubt. The difficulty frequently attending the recognition of miliary tuberculosis is well known, and it was hoped that the ophthlamic test would prove a valuable aid in the diagnosis of this affection. Experience, however, has proved the test to be of little value in this condition.

The two patients whom I examined gave a negative result. The subsequent administration of tuberculin subcutaneously failed to develop the reaction.

6. THE JOURNAL A. M. A., Jan. 25, 1908, l, 259.
7. Gaz. hebd. d. sc. méd. de Bordeaux, Aug. 4, 1907.
8. Jour. de méd. de Bordeaux, Aug. 25, 1907, xlix, 1969.
9. THE JOURNAL A. M. A., Dec. 14, 1907.
10. Berl. klin. Wchnschr., xlv, 45-88.

The cause for the failure of the reaction in this class of patients has not yet been satisfactorily explained. Smithies and Walker[11] believe that the blood is so laden with tubercle bacilli that they seize the available lysins and opsonins, leaving little or none to combine with the bacilli, or the fragments of such enmeshed in the conjunctiva. As a consequence, the endotoxin is not released locally and no inflammation ensues. Their theory, however, is based on the erroneous idea that the tuberculin consists of fragments of dead bacilli.

The failure to obtain the reaction in a certain proportion of cases, in which the lesions are well healed and inactive, probably finds its best explanation in the fact that sufficient tuberculin is not being elaborated into the circulation to bring about a sensitization of the conjunctivæ.

There are cases of undoubted tuberculosis which fail to react, and this failure may be dependent on one or several of the following factors:

1. *Faulty Technic.*—I have seen several cases in which the negative results could be directly attributed to this cause.

2. *Poor Tuberculin.*—The possibility of the tuberculin being inert must always be borne in mind. The tuberculin of a well-known manufacturer, in my hands, gave a negative result in twenty-five undoubted cases of tuberculosis. The same patients gave a prompt response to another preparation of tuberculin, care being exercised to make the second instillation in the opposite eye.

3. *Instillations Made in the Negative Phase.*—This question has not yet been definitely settled, but it is possible that future experiments will prove that tuberculous patients will only react when in the positive phase, that is, with the opsonic index normal or above, and with the defensive forces of the body active.

4. *Method of Infection.*—Raw advanced the view that certain forms of tuberculosis were due to infection with human bacilli, while others were due to infection with bovine bacilli. This suggests the possibility that failure to obtain reaction in certain tuberculous patients may be due to the employment of tuberculin prepared from a different type of bacillus from that with which the patient is infected.

REACTION IN APPARENTLY HEALTHY PERSONS.

My experiments, as well as those of other investigators, show that a certain number of apparently healthy individuals give a positive reaction. The occurrence of reactions in these cases may be dependent on one or more of the following factors:

1. The great difficulty in demonstrating certain patients to be clinically tuberculous. This is well illustrated by the autopsy records; which show a large number of cases to be tuberculous, in which the condition was not apparent during life.

2. The tolerance of the conjunctiva of healthy persons to tuberculin. Tuberculin solutions of 1 per cent. or above are capable of exciting inflammation of the conjunctivæ of healthy persons. Solutions of this strength should rarely be employed.

3. The possibility of the patient rubbing and irritating the eye, thereby producing a pseudo reaction, must always be borne in mind.

4. Idiosyncrasy. It is possible that experience will show that certain individuals possess a marked susceptibility to tuberculin, as is frequently manifested to certain drugs.

11. Lancet, London, Feb. 15, 1908.

CONCLUSIONS.

1. A positive reaction is fairly reliable evidence of the existence of tuberculosis.

2. A negative result does not exclude the possible presence of tuberculosis.

3. In properly selected cases and with tuberculin of proper strength, the test is free from any serious danger.

4. Tuberculin solutions of 0.5 per cent. are to be preferred in all cases; solutions of greater strength should rarely, if ever, be employed.

5. The test is of value from the standpoint of prognosis. A prompt and vigorous reaction indicating that the patient is successfully combating the disease.

6. Very advanced and moribund cases fail to react, also cases of miliary tuberculosis.

7. The administration of tuberculin in moderate amounts, subcutaneously, will not develop the reaction in healthy persons. In tuberculous patients it accentuates the pre-existing inflammation, and may cause the appearance of the reaction. It apparently fails to develop the reaction in cases of acute miliary tuberculosis

8. The theory of the existence of the state of anaphylaxis or local hypersusceptibility best explains the occurrence of the reaction.

9. No more than two instillations should be made, the opposite eye being employed for the second test.

10. The state of anaphylaxis or local hypersusceptibility produced in healthy persons is apparently not transferred to the opposite eye.

11. The sensitization in the eye does not seem to be followed by a general hypersusceptibility, manifested by a reaction to the subcutaneous injection of tuberculin.

12. In the great majority of cases no constitutional symptoms are associated with the reaction. No alteration occurs in the physical signs, such as frequently occurs following the administration of tuberculin subcutaneously.

13. A certain proportion of enteric fever cases give a positive reaction. This is most apt to occur in patients who are convalescing.

14. As yet there is no definite evidence for regarding it as a group reaction.

15. When the lesion is well healed and inactive a negative result is often obtained.

16. The test should not be resorted to if the diagnosis can be made by physical signs and symptoms.

The investigations which form the basis of this paper were conducted in the wards of Dr. Hobart A. Hare, Dr. S. Solis-Cohen and Dr. H. R. M. Landis, in the Jefferson and Philadelphia General hospitals. Without their aid the completion of this work would have been impossible. I feel deeply indebted to them for allowing the tests to be conducted in their wards.

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Treatment of Hammer Toe.—E. Martin gives an illustration in the *Zeitschrift für Ærztliche Fortbildung*, Oct. 1, 1908, of a simple method with which he keeps hammer toe under control. He passes a piece of elastic webbing, about an inch wide and a yard long, over the affected toe and under the other toes, then crosses the ends of the elastic over the dorsum of the foot and behind the ankle, fastening the ends together in front above. If the toe is contracted downward the elastic band is passed under it and over the other toes. This simple measure has cured many cases of contracture in his experience and aided in the healing after tenotomy.

ABNORMAL SECRETION FROM THE MAMMARY GLANDS IN NON-PREGNANT WOMEN.*

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An accidental accumulation of cases of abnormal secretion from the mammary glands in non-pregnant women, coming under my observation, led me to investigate the literature on this curious phenomenon.

The occasional occurrence of such an abnormal secretion in the newborn of either sex is sufficiently known, but a satisfactory explanation has not yet been given. Steifensand,[1] in 1845, was the first to call attention to the fact that, in the newborn, all glands exhibit a very pronounced activity. Basch[2] ascribes the phenomenon to the welling up of the secretion toward the surface, thereby loosening the hornified epithelium which clogs the orifices of the milk ducts. Bumm[3] says that the skin of the newborn is very sensitive and responds to the influence of air and light by reddening and exfoliation of the uppermost layers of the epidermis. This irritation of the skin is also the cause of the secretion of the mammæ which, as yet undeveloped, have the appearance of somewhat large sweat glands and secrete, within the first week, a few drops of a whitish fluid. On the other hand, Longridge,[4] who carefully studied the mammary glands of stillborn infants, finds that in large children with abundance of subcutaneous fat the breasts are usually well developed irrespective of sex. The breast tissue can be distinctly felt as a solid mass lying below the primary areola, and on squeezing it a fluid which, on microscopic examination, is indistinguishable from milk, can be expressed. Starling and Lane-Claypon,[5] pursuing the idea that chemical factors must play an important rôle in the correlation of function between different parts of the body, think that the activity of the infantile breast is brought about by the presence in the fetal circulation of the same body which acts as the physiologic stimulus to the mother's breasts; this body probably originates within the fetus itself. The existence of such a "chemical messenger" is also assumed by Halban, though his theory of its nature and origin materially differs from that of Starling. Halban concluded from his researches[6] that pregnancy produces local phenomena in the fetus which are identical, though not as intense, with those in the organism of the mother. Thus, not only the uterus, but also the mamma of the fetus hypertrophies in pregnancy and exhibits characteristic histologic changes. In a later study[7] he attributes the causation of this mammary hypertrophy to an internal secretion of the placenta.

Whatever the nature of this "witches' milk" of the newborn may be, the activity of the breast soon ceases or lies dormant until the mysterious force of puberty stimulates it into new life. The swelling and soreness of the virginal breast, together with a limited secretion of a colostrum-like fluid on the advent of the first menstruation, are too frequent an occurrence to require more than mention. In some cases this correlation of mammary and uterine functions becomes permanent, at least for a number of years. Only the remarkable case reported by Blum[8] may be here recorded. A girl, 17 years of age, with two well-developed mammæ in their normal place, has, in the region of the mons veneris, a third mamma of the size of a goose egg, with seven nipples. Of these only four secrete regularly a copious amount of colostrum before and during the first day of menstruation. The two normal mammæ do not secrete at all.

In exceptional instances this lacteal secretion may altogether take the place of menstruation. Puech and Courty[9] have collected twenty-six cases of such vicarious menstruation, to which the cases of Landau[10] and Gautier[11] may be added. In the observation made by Jones[12] this vicarious menstruation manifested itself, during five years, by an abundant flow of milk lasting thirty-six hours every month.

It seems plausible that an appropriate stimulus can intensify this virginal secretion sufficiently so that it can nourish an infant. It is true that the older literature which abounds in instances of this kind can not withstand the test of scientific criticism. Yet there are cases reported by trustworthy observers which must convince us of the possibility of such an occurrence. The most widely cited instance, that of a girl of 8 years, who had suckled her infant brother for a month, was recorded by Baudelocque, and the young wet-nurse demonstrated before the Surgical Society of Paris in 1783.

Knott[13] vouches for three cases of abnormal lactation in nurse-girls who had charge of babies whose mothers were unable to carry out the function of maternity. "In each case the girl allowed the very uneasy bedfellow with whom she was thus supplied to play with her breasts and suck the nipples as the only possible way of procuring even a fragmentary night's sleep." In each, an increased sense of fulness and warmth in the mammary glands occurred and was followed in a couple of days by the appearance of a copious formation of milk. This, however, yielded very easily to simple treatment. Noël,[14] who has collected a large number of instances of abnormal secretion, mentions the case of a young married woman who had never had sexual intercourse. This woman took care during the day of an infant of six months, who, until then, had been nursed by his mother. As the child refused the bottle, she offered him her breast with the surprising result that the mammæ, heretofore rather small, increased in size and secreted a large quantity of milk, so that the child grew visibly and refused the mother's breasts after the latter's return from her trip. The nursing, at first quite painful, soon created an agreeable sensation. During the night, the engorgement of the breasts became very uncomfortable,

*Read in Section on Obstetrics and Diseases of Women of the American Medical Association at the Fifty-ninth Annual Session, held at Chicago, June, 1908.

1. Quoted from Knapp; F. von Winckel's Handbuch. der Geburtshilfe, 1904, ii, part 1, p. 163.
2. Beitrag zur Kenntnis des menschlichen Milchapparates, Arch. f. Gynäk. xl, No. 1.
3. Grundriss z. Studium d. Geburtshilfe, ed. 2, 1903, p. 271.
4. Infantile Breast Tissue, Jour. Obstet. and Gynec. Brit. Emp., March, 1908, p. 165.
5. The Chemical Control of the Body, THE JOURNAL A. M. A., March 14, 1908, l, 835.
6. Schwangerschaftssecretionen der foetalen Organe, Ztschr. f. Geburtsch. and Gynäk., 1904, lili, 191.
7. Die innere Secretion von Ovarium und Placenta. Arch. f. Gynäk., 1905, lxxv, 353.
8. München. med. Wchnschr., May 21, 1907, No. 9.
9. Quoted from Hennig: Zentralbl. f. Gynäk., 1908, No. 18, p. 601
10. Landau, T.: Ueber einige Anomalien der Brustdrüsensecretion, Deutsch. med. Wchschr., 1890, p. 745.
11. Gautier neveu: Un cas de sécrétion lactée remplaçant les règles chez une jeune fille vierge, Lyon méd., 1903, p. 199.
12. Am. Jour. Obstet., 1897, p. 92.
13. Abnormal Lactation in the Virgin, Am. Med., 1907, p. 373.
14. Noel, H.: Nouvelles observations de sécrétion lactée chez les femelles non fécondées et chez les mâles, Echo. méd. d. Cévennes, 1901, p. 207.

so that the next morning was always expected with impatience.

These few references may suffice, particularly as they are corroborated by the observations of animal breeders. Thus virginal sheep, bitches and rabbits have occasionally been found to secrete milk. The stimulating cause in animals must be sought in rut and sexual intercourse. To select only one of the many writers on this subject, Harvey[15] stated that overfed bitches, which admit the dog without fecundation following, are nevertheless sluggish about the time they should have whelped, and bark as they do when their time is at hand, and also steal away the whelps of another bitch, tend and lick them, and fight fiercely for them. Others have milk or colostrum in their teats and are, moreover, subject to the diseases of those which have actually whelped.

An interesting observation on the relationship of mammary secretion and menstruation is recorded by Noël,[14] who had in his possession for a dozen years or more a female ape belonging to the family of Cercopithecus, a genuine *virgo intacta,* which spent its days in a cage. The menstrual flow appeared regularly every month, lasted three to four days and was preceded and followed by a copious, colorless vaginal discharge. After the menstruation in February, 1899, the animal, for some unknown reason, played with its breast, which, after a few days, produced a few drops of colostrum. These, under the combined effect of incessant massage and prolonged suctions, changed into an abundant supply of milk. The same procedure caused an identical result of the left mamma. This paradoxical lactation lasted for nine months, and, as the result of persistent manipulation on the part of the animal, reappeared after two months, and was still extant when Noël's report went to press fourteen months later. In summer the secretion was less than in cold weather. As long as the lactation was profuse the menstruation disappeared only to occur regularly whenever the mammary secretion ceased or markedly decreased.

Instances of this curious secretion in the adult human male and in male animals have appeared sporadically in literature, but are not within the scope of this paper. It is possible that such cases belong to the class of pseudohermaphrodites. The reports are altogether too vague to permit of critical analysis.

The physiologic, that is, the most common, and at the same time the strongest, stimulus for the function of the mammary gland is pregnancy. As a rule, the formation of colostrum begins in the second month of gestation, the transformation into milk on the second or third day of the puerperium. The period of lactation lasts, on an average, one year, but ranges, in individual cases, within wide limits. It is, however, permissible to speak again of "abnormal mammary secretion in non-pregnant women" if the duration of lactation exceeds two years, when the organism of the child obviously has become independent of the milk supply from the mother.

Yet it is an altogether common occurrence to see lactation intentionally prolonged for an indefinite period of time. In the ethnographic work by Ploss[16] we find that this unnatural custom is distributed among all races and nations, all over the globe. I myself,[17] in my travels in Japan and Siam, have repeatedly seen a boy of 6 or 7 years interrupt his play or put the palm-leaf cigarette behind the ear in order to return to his mother's breast and take a sip of milk. In the poor and ignorant peasantry of middle Europe this custom is due partly to economical reasons, partly to the question of personal convenience. The most potent factor, however, very likely lies in the common popular error that lactation, and through it, amenorrhea prevents further conception.

There are several cases on record of extraordinary prolongation of lactation. Kamneff[18] reports a case of thirty-two years' duration, and Cazeau[19] describes another case in which an abundance of milk was secreted for forty-seven years. Even in the absence of an artificial stimulation by persistent suckling lactation may be abnormally prolonged. In the instance published by Arnheim[20] the patient, a woman of 26 years, was confined four years ago. Since then there has been a profuse mammary secretion which has resisted all known methods of treatment.

While, in the categories thus far discussed, we have encountered some sort of stimulus which could be held responsible for the abnormal mammary secretion, there is no such causation apparent in that strange complex of symptoms which make up the clinical picture of false pregnancy. Leaving aside the cases of purposely feigned pregnancy and postponing, for the moment, the discussion of pseudocyesis near the menopause, we know of this false or nervous pregnancy practically nothing but that either the wish or the fear is father to the thought. Yet such instances of secretion of colostrum, or even milk, from the breasts in false pregnancy are familiar to most obstetricans. A good illustration is the following case:

CASE 1.—*Patient.*—Mrs. T. A., 27 years old, married three years, had five miscarriages, the last of which occurred about the middle of February, 1904. (Syphilis?) She was extremely anxious to have children.

June 1, 1904: The patient noticed that her abdomen was growing larger. There was engorgement of the breasts containing milky fluid; regular morning sickness, at times vomiting; "fetal movements" for last six months. The patient believed herself pregnant. On examination a slight amount of colostrum was expressed from each mamma. The enlargement of the abdomen was found to be due to fat. The uterus was of normal size and consistency, in movable retroversion. There were positively no signs of pregnancy.

July 30, 1904: The patient had normal menstruations in June and July. The breasts still contained colostrum.

Oct. 15, 1904: The patient became pregnant in September, but passed out of my hands. I ascertained later that she again miscarried, was curetted, and died from septic infection.

A class by itself is formed by women in, or near, the climacterium with abnormal secretion from the breast. Tilt[21] found mammary irritation and swelling with the secretion of milky or glutinous fluid in 14 out of 500 women at menopause.

Billroth,[22] who assumed a very critical attitude toward most of the reports in literature, cited the case of the 59-year-old wife of a working man, who nursed, without a coincident delivery, her 9-months-old grandchild. At the beginning the child was nursed by its mother, who was, however, compelled to wean it. The child became so restless that the old woman, who had not menstruated

15. Quoted from Edgar: Practice of Obstetrics, 1903, p. 484.
16. Ploss and Bartels: Das Weib. in der Natur- und Völkerkunde, ed. 6, Leipsic, 1899.
17. Medizinische Reise Erinnerungen aus Siam, Deutsche med. Wchnschr., 1899, xxv, No. 9.
18. Vrach, 1889, xx, p. 450.
19. Quoted from Noel: Echo méd. d. Cévennes, 1901, p. 207.
20. Tr. Med. Soc., Hamburg, Deutsch. mediz. Wchnschr., 1908, p. 445.
21. Quoted from Johnston: Am. Jour. Obstet., xxi, 1888, 830.
22. Diseases of the Female Mammary Glands, Cycl. Obstet. and Gynec., 1887, ix, 44.

for ten years, placed it to her own breasts to quiet it. Suddenly she felt piercing pains in both breasts, and on examination she found some drops of a milk-like fluid. The child was then zealously put to the breasts with the result of producing such a free flow of milk that it was exclusively fed by the grandmother. Another case in question mentioned by Billroth is that of a woman of 82 years. Rashid-ud-Din[23] records an old woman of 60 acting as wet-nurse to her grandchild. Incredible as these cases, which can easily be multiplied, seem, they are undoubtedly true. I, too, have seen several such instances in Siam.[17]

It seems a bewildering task to search for the cause of this phenomenon. According to Bloodgood,[24] there should be in the senile breast an atrophy of both parenchyma and stroma. The atrophy of the parenchyma is usually more marked up to its almost complete disappearance. The stroma never completely disappears. As the breast tissue disappears it is replaced by fat. It is due to this fact that, notwithstanding advancing age, in some well-nourished women, the breasts do not perceptibly decrease in size. In approximately 25 per cent. of the cases, however, a parenchymatous hypertrophy takes place in the senile breast. This senile parenchymatous hypertrophy may be divided into three stages: the adenomatous, ectasia and the adenocystic. As a rule, all three are present in different degrees. In the adenomatous stage one finds in the affected area more ducts and acini than in normal breast tissue. The stage of ectasia, which interests us most for the subject in hand, shows little dilated cavities filled with fluid or semifluid contents composed of débris of degenerated cells.

The appearance of "milk" in the senile breast may be due, in some cases, to this parenchymatous hypertrophy of Bloodgood. In others, as will be seen in the following cases, such a causation is certainly lacking.

CASE 2.—*Patient.*—Mrs. I. C., aged 39, mother of two children of 19 and 17, respectively; had no conception since. Menstruation was always regular, but scant; the last was three weeks before examination. The patient believed that she was pregnant because she "felt life," although the menses had never ceased. Her abdomen was growing larger and her breasts contained "milk." She was nauseated at times.

Examination.—Jan. 10, 1908. The patient looked much older than her actual age. There was a copious amount of colostrum in both mammæ, which were very flaccid. The vulva was senile; the uterus large and hard, in normal position; the adnexa normal. The patient was not pregnant.

CASE 3.—*Patient.*—Mrs. M. S., aged 42, had one confinement twelve years previous to examination; was in menopause for six months. She wanted to know whether she was pregnant.

Examination.—June 12, 1907. Mammæ were very flaccid; contained colostrum. The uterus was of hard consistency, in movable retroversion; the adnexa normal. The patient was not pregnant.

CASE 4.—*Patient.*—Mrs. C. P., aged 50, had a number of early miscarriages between the ages of 20 and 30 years. She married the second time eight and one-half months previous to time of examination. Menstruations were more infrequent of late, the last one six weeks previously. She stated that, since her second miscarriage, her abdomen was constantly growing larger, and that the configuration corresponded to "that of the last month of pregnancy." She felt persistent "fetal movements."

Examination.—Dec. 31, 1907. The patient was of medium size, rather stout, with an enormous deposit of fat in the abdominal walls. There were no signs of pregnancy or tumefaction of genital organs. Both breasts were large. The left mamma contained some fluid. The patient was informed of my diagnosis of obesity and climacterium.

Feb. 7, 1908: The patient had a slight menstruation at the end of January. She was still convinced that her confinement would take place within a few weeks. She aserted that the nipples of both breasts were more pigmented than before. "Fetal movements" were still pronounced. Examination was again negative as to the question of pregnancy. A gold-brown clear fluid was easily squeezed out of the left breast and presented, microscopically, the typical appearance of colostrum.

April 10, 1908: The patient informed me that she had taken up Christian Science and that the abdomen had considerably decreased in size; the fetal motions had ceased, and the milk had disappeared.

It is interesting to notice that the inevitable outcome in this case is erroneously attributed to the false doctrine of Eddyism. The patient completely overlooked the fact that I predicted the cessation of her symptoms three months previously and for this purpose recommended a change of her sedentary habits.

The foregoing are cases in which neither the desire for nor the fear of offspring, but merely the appearance of lacteal fluid gave rise to the thought of a belated pregnancy. The causal stimulus of this abnormal secretion, however, is entirely unknown. Yet there can be no doubt that only an appropriate stimulus is needed to bring about mammary activity in any case. This is conclusively shown in the cases in which, after normal delivery, lactation ceased, but was revived by persistent and energetic suctions. The interval of mammary inactivity is sometimes surprisingly long. Noël[14] cites several instances in which, even after a total absence of mammary secretion for four months, the child could be fully nourished by the breast.

An "appropriate" stimulus is not necessarily a mechanical one, that is, suction or traction.

The following case seems to indicate the possibility of a psychic influence:

CASE 5.—*Patient.*—Mrs. A. N., aged 40, was under my observation for eight years. She has a decidedly emotional temperament. During the last year she had frequent metrorrhagias for which she was curetted (in my absence) and took styptic medicines internally without lasting benefit. I saw her May 26, 1908, when she had been bleeding copiously for the last fifty-one days. The absence of any tangible cause, on repeated examinations and the excessive nervousness of the patient, called my attention to domestic difficulties of a serious nature under which she had labored for many months past. Three hypodermic injections of styptics, with administration of bromids, gave complete relief in twenty-four hours.

Since then these hemorrhages have returned once or twice immediately following a psychic disturbance, but were speedily checked on the patient's taking bromids. During these periods of excitement I also found that the breasts, which were not enlarged, contained a small amount of grayish fluid. On one of these occasions the patient exclaimed: "Whenever I hear a baby crying, I feel as though I could nurse it!"

Levene and Paderi[25] have observed that the subcutaneous injection of phloridzin, in some cases, is followed by an increased activity of the mammary glands. Misrachi[26] succeeded, three weeks after cessation of secretion, in producing a continuous production of milk by faradization of the mammæ. Dassier[27] and Biedert[28]

23. Indian Med. Rec., 1896, x, 114.
24. Senile Parenchymatous Hypertrophy of Female Breast, Surg., Gynec. and Obstet., 1906, p. 721.
25. Levene and Paderi, quoted from Caspar: Handbuch der Cystoskopie, 1905, p. 244.
26. Quoted from Knapp: von Winckel's Handbuch für Geburtshilfe, 1904, ii, part 1, p. 164.
27. Séance pub. Soc. roy. de méd., chir. et. pharm. de Toulouse, 1837, p. 25.
28. Quoted from Knapp: von Winckel's Handbuch, für Geburtshilfe, 1904, ii, part 1.

noticed in climacteric women secretion of milk following a mastitis. These cases lead to the very interesting question of activity of the breast due to pathologic conditions. Tumors of the breast itself may be left entirely out of consideration. We are here mainly concerned with affections within the genital sphere.

P. Mueller[29] has observed, in the University Clinic at Berne, fourteen cases of mammary secretion in sterile women, "in most of whom there coexisted some sort of a gynecologic disease." Of these, fibroids of the uterus are usually mentioned in connection with the reflex phenomenon in the breast. Thus, Säxinger[30] is given credit for observations of this kind. H. W. Freund[31] found in 25 out of 44 cases of fibroids colostrum in the mammæ. He believes that the alteration of the blood by the uterine tumor causes the mammary symptom. Because he never succeeded in producing secretion from the breasts by irritating, for weeks, the uterine cavity with strong galvanic currents, he excludes reflex through the nervous system.

Reports on this particular subject are exceedingly meager. It seems to me that the same cases are cited over and over again. Considering the enormous frequency of uterine fibroids, one would naturally expect the reflex symptom more often. I have in vain paid attention to it for a number of years, and so acute an observer as Billroth[22] states plainly that "in a tolerably large number of such tumors . . . ," he has "never witnessed such coincidence with abnormal milk-secretion."

Johnston,[32] reporting two cases of mammary secretion in false pregnancy, asserts that the occurrence of this abnormal activity with other disturbances usually associated with pregnancy began in one case at the same time that a hitherto normally situated uterus became retroflexed and was dependent thereon, for with the restoration of the uterus to its normal position, this condition became less marked and finally disappeared. In the case of Cramer[33] a woman of 33 had had a miscarriage nine years previously. Following this she suffered from an ascending gonorrhea, which resulted in fixed retroversion and sterility. At every menstruation thereafter there was an abundant lacteal secretion from the breast, for which, according to Cramer, the chronic inflammatory irritation of the uterus was perhaps responsible. Cramer operated on a woman of 40, eight years after her last confinement, for prolapse of the uterus with primary healing. The operation was followed by enlargement and copious secretion of the breasts.

Similar observations have been made in cases of obesity and in inflammatory diseases of the tubes and ovaries (Foges[34]).

CASE 6.—*Patient.*—Mrs. E. S., aged 28, has a child a year old which she did not nurse. She had always been fleshy, but had grown very stout since the confinement. Her menses were regular, lasting from one-half to one and a half days, very scant. The last menstruation was two weeks before the examination. She had been nauseated since March. Her breasts were swollen, and for this reason she believed herself pregnant.

Examination.—June 19, 1908: The patient was an enormously fat woman with a gigantic abdomen. There was colostrum in both mammæ, but there were positively no signs of pregnancy. The diagnosis was obesity.

It would be desirable to publish, in future, every case of this kind and to subject it to scrutinizing analysis in order either to establish a mere coincidence or to throw light on a hitherto obscure chapter of the physiology of the genital organs.

The perplexity of our problem becomes even more apparent if we consider the influence of castration on the mammary glands. That the removal of both ovaries does not interfere with the secretion of milk in pregnant or puerperal women is conclusively shown by the numerous cases in which double ovariotomy was done before or after labor without impairment of lactation. One illustration may suffice.

Cramer[33] performed Cesarean section and Porro's operation on a woman of 36 for osteomalacia. This patient nursed her baby for eleven months. These facts are well known to animal breeders and, indeed, have been of practical importance to them. Lejoux, Venuta[35] and others find that castrated cows produce more milk than non-castrated ones. Oceanu and Babes[36] concluded from their experiments that double ovariotomy in goats not only prolongs, but also improves the secretion of milk; eliminating, for instance, the characteristic taste of the goat's milk at once. While in these cases, castration did not impair an already established secretion, there are, moreover, unimpeachable instances in which this operation actually produced lactation. Alterthum[37] found colostrum in the mammæ in 5 out of 18 cases after castration. Landau[10] has published a striking case. One and a half years after a double ovariotomy he found a free secretion of white milk for several months in a young woman of 26 who had never conceived. Gruenbaum[38] and Alsberg,[39] both from Landau's clinic, have added fifteen cases in which the removal of both ovaries was followed by mammary secretion which was either colostrum or milk. The secretion occurred both in multiparous and nulliparous women, independently of the age of the patients, provided they were still within the age of sexual activity. In some of these cases the ovaries were quite normal, in others totally diseased. This mammary secretion, then, was caused by the complete ablation of both ovaries. On the other hand, in those cases in which only the uterus or only one ovary was removed, or in which a remnant only of one ovary had been left behind, no secretion occurred. In Case 20 of Gruenbaum's statistics, the ovaries, save a small remnant on one side, had been removed in 1904. The patient had regular menstruations for three years. She was readmitted to the hospital because the ovarian remnant had degenerated into a cystic tumor. She was operated on for the second time in 1907, and the tumor radically removed. Eighteen days later a profuse secretion of colostrum occurred. The beginnning of the secretion, as a rule, was observed in the third week after operation, or later. It ceased, in some cases, after a few days or weeks; in others, it lasted as late as four months. An observation of my own may here be added:

29. Quoted from Ploss and Bartels: Das Weib in der Natur- und Völkerkunde, ed. 6, Leipsic, 1899.
30. Cited by Stumpf: von Winckel's Handbuch für Geburtshilfe, III, part 3, p. 540.
31. Die Beziehungen der Schilddrüse und Brustdrüse, Deutsch. Ztschr. f. Chir., 1891, xxxi, 446.
32. Am. Jour. Obstet., 1888, xxi, 830.
33. Einige Beobachtungen über die Funktion der weiblichen Brustdrüse, Monatschr. f. Gynäk. u. Geburtsh., 1907, xxvi, 367.
34. Beitrag zu der Beziehungen von Mamma und Genitale, Wien. klin. Wchnschr., Jan. 30, 1908.
35. Quoted from Halban: Arch. f. Gynäk., 1905.
36. Compt. rend. Acad. d. sci., Paris; München. med. Wchnschr., Feb. 21, 1905.
37. Folgezustaende nach Kastration, Beitr. z. Geburtsh. u. Gynäk., 1899, ii, 13.
38. Gruenbaum: Milchsekretion nach Kastration, Deutsch. med. Wchnschr., 1907, p. 1038.
39. Alsberg: Brustdrüse und Eierstock, Zentralbl. f. Gynäk., 1907, p. 1581.

CASE 7.—*Patient.*—Mrs. A. H., aged 19, had had one confinement two years previous to operation mentioned below. She nursed her baby for four months. She suffered for eight months before the operation with intense pain in lower abdomen.

Operation.—Jan. 13, 1908: Abdominal panhysterectomy was performed for double pyosalpinx, abscess of left ovary, cyst of left parovarium, and an extensive pelveoperitonitis adhæsiva.

Postoperative History.—Convalescence was satisfactory, save a superficial suppuration of the incision.

Feb. 2, 1908: As the symptoms of artificial menopause (hot flashes, etc.) were pronounced, ovarian extract, 5 grains, t. i. d., was ordered.

Feb. 7, 1908: There was copious secretion of a grayish fluid from both breasts which heretofore had been absolutely dry. Microscopic examination revealed typical colostrum.

Feb. 25, 1908: The patient was discharged in good health. Mammary secretion was still present.

Epicrisis.—The interval of five days between the first administration of ovarian extract and the appearance of colostrum in the breasts was too short to suggest any influence from the organotherapy. For this reason, the case must be classed with those of abnormal mammary secretion following castration.

Atrophy of the ovaries may produce the same phenomenon. Foges[34] observed several patients who, after parturition, had amenorrhea for a number of years, yet exhibited an abundant secretion of milk in spite of the fact that they had never nursed their children. The following observation of my own belongs to this category:

CASE 8.—*Patient.*—Mrs. H. L., 25 years old, had been married for three years without conceiving. Her menses were very irregular, about once in three months, and very scanty.

Examination.—The patient's breasts were small, more like those of a girl of 14. The vagina was very short, and the vaginal vaults were unusually shallow. The uterus measured only 6 cm. Both ovaries were apparently normal to the touch. In every other respect the patient seemed to be normally developed.

June 15, 1908: The patient asserted that whenever menstruation would be due without actually occurring, the breasts would feel sore and contain fluid. This being a menstrual date, I found a large quantity of colostrum in both mammæ.

September 3: The patient had, after an amenorrhea of two months, just one drop of bloody discharge on each day for four consecutive days, about a week ago. On slight pressure a thin fluid squirted out of both breasts.

Halban[7] explains all these cases by the theory that the ovary, by its internal secretion, brings about the development of the mamma into an organ capable of function. As long as the glandular substance of the mamma develops, secretion of milk does not occur. When the growth of the mammary gland ceases, retrogressive changes set in which manifest themselves by production of milk. The growth of the mamma is controlled by the ovary. Without the ovary there is no further growth, and the mamma undergoes involution. Thus, if the ovaries are removed or become atrophic, involution of the mamma is no longer held in check, and lactation may ensue. In pregnancy, when the ovary is supposed to remain inactive, the function of the ovary is taken up by the placenta. The latter, too, has an internal secretion. The substances originating in the placenta have the same effect on the mamma, namely, that of preventing retrogressive changes. After birth, the placenta no longer exercises its inhibitory influence, and milk appears. In this manner the occurrence of lacteal secretion in the puerperium is explained as well as that after castration and in the climacterium.

This explanation would be plausible enough were it not for the following observation of Cramer.[40] In a woman of 21, atrophy of both ovaries was supposed to exist because of amenorrhea since her only confinement two years previously. Transplantation of two healthy ovaries from another woman was performed. A few weeks after the operation there was a secretion from both mammæ, which hitherto had been absolutely dry.

Abnormal outward appearance of milk may be mentioned, though it is in but loose connection with our subject. Blue milk owes its color to the development of the *Bacillus pyocyaneus*. Red milk is due to the presence of the *Micrococcus prodigiosus*. Yellow milk is also produced by the growth of a bacillus. Sheild,[41] from whom these notes are taken, also speaks of a case of green milk, the color of which was not due to bile pigment, but very likely to an aromatic body produced by bacteria.

From these cases those instances must be distinguished in which blood was secreted by the mamma. The presence of malignant tumors of the breast should first be excluded. In a few, though not well authenticated cases, vicarious menstruation occurred from the mamma. Rarely hysteria produces this remarkable phenomenon.

Skutsch[42] recently demonstrated a case of this sort. Another case with all symptoms of pronounced hysteria was published by Chipault,[43] who also gives the scanty literature on the subject. The true hysteria breast is characterized mainly by a vasomotor edema which causes ecchymoses and hemorrhage. It is quite important to recognize the real hysteric nature of these hemorrhages in order to avoid operations.

The question of the primary cause of mammary activity has been repeatedly touched on in the foregoing. The clinicians have been always inclined to assume an influence of the nervous system on lacteal secretion, and they have based their views mainly on the observation that the secretion of milk is sometimes greatly altered by such emotions as passion, grief, or mental depressions. The text-books on physiology arrive at similar conclusions, principally from analogy between the mammæ and other glands, the secretion of which is subject to nerve stimuli.

Kurdinowski[44] assumes that the pregnant uterus presses on neighboring organs and nerves, producing a constant mechanical irritation which is transmitted to the mamma. The same effect may occur if the uterus is enlarged by fibroids or by a combination of metritis and retroflexion.

The exact experimental proof, however, is still lacking. It is true that Roehrig,[45] Laffont and others, from their researches, have asserted that irritation of the peripheral nerves of the mammæ actually increases the activity of these glands, but their results have been challenged and disproved by the majority of observers. Ribbert's[46] experiment is particularly noteworthy. Ribbert extirpated the mamma in a young guinea-pig and transplanted it beneath the skin of the ear. When the animal became pregnant the transplanted gland de-

40. Transplantation menschlicher Ovarien, München. med. Wchnschr., 1906, liii, 1906.
41. A Clinical Treatise on Diseases of the Breast, London, 1898.
42. Tr. Obst. Soc., Leipsic; Zentralbl. f. Gynäk., Jan. 11, 1908.
43. Un cas d'hemorrhagie hystérique du sein, Presse méd., Aug. 15, 1896.
44. Ueber die reflektorische Wechselbeziehung, Arch. f. Gynäk., 1907, lxxxi, 340.
45. Quoted from Basch: Jahrb. f. Kinderh., 1906, lxiv, 795.
46. Ribbert: Ueber Transplantationen von Ovarium, Hoden und Mamma, Arch. f. Entwickingsmech. d. Organ., 1898, xii, 688.

veloped normally and afterward produced milk. A similar result was obtained by Basch.[47] In a bitch in which the left spermatic nerve and the celiac plexus had been resected previously, thus depriving the lowermost mammary gland of both the peripheral and sympathetic nervous impulses, the gland was transplanted on the back. After some time pregnancy occurred. The gland became hypermic and well-developed. After delivery there was absolutely no difference in the milk secretion of the transplanted gland and that of the other mammæ of the animal.

It must, then, be accepted as an established fact that the specific function of the mammary gland is independent of the nervous system.

Starling[5] injected extracts made from different parts of the immature rabbit fetuses into virgin rabbits and thereby produced well-marked hypertrophy of the mammary glands similar to that observed during the earlier stages of pregnancy. He, therefore, concludes that "the growth of the mammary glands during pregnancy is due to the assimilatory or inhibitory effects of a specific chemical substance produced in the body of the fetus and carried thence through the placenta by the fetal and maternal circulations. The removal of the inhibitory stimulus at the end of pregnancy determines the spontaneous break-down of the built-up tissues, i. e., activity which in these cells is expressed by the formation of milk."

The ingenious and painstaking researches of Halban[5, 6] have already been referred to. According to Halban, the etiology of mammary function has nothing to do with the fetus, but this function is due to the internal secretion of the ovary; in pregnancy, the function of the ovary is temporarily assumed by internal secretion of the placenta. This theory of Halban's throws much light on a problem of science which hitherto has been very obscure, despite the enormous number of investigations which have preceded his. H. de Rothschild[48] has collected up to 1899 not less than 8,375 publications on the subject.

It is the object of this paper to call attention to the fact that further accurate observations are needed to settle certain mooted questions. We have seen, in the foregoing, that lacteal secretion does not only occur in pregnancy and puerperium but that it also may appear in the newborn, in the growing child, in the adult virgin and in the old woman. It may be prolonged indefinitely after childbirth, and may be associated with certain pathologic conditions within the genital sphere. The last named phenomenon, in particular, demands earnest consideration, and the hope is expressed that a discussion on this subject will bring forth experience gained in this country. Aside from the intense scientific interest in the etiology of lacteal secretion, there is also considerable practical importance attached to abnormal activity of the mammary glands, and a thorough knowledge of atypical function of these organs is indispensable to the expert in medicolegal practice.

Linnar Building.

DISCUSSION.

DR. W. O. HENRY, Omaha: I saw a case the features of which emphasize what Dr. Gellhorn has said. The case was that of a woman 36 years old, the mother of one child 12 years old. She had some inflammatory trouble and both her ovaries and tubes were removed. Shortly thereafter she had a regular monthly formation of milk in the breasts lasting for from four to five days. This continued for over a year and then ceased.

DR. BERNARD COHEN, Buffalo: A few years ago I saw another case similar to the one reported. The case was that of a girl of 17 who had two supernumerary breasts, one over the right iliac region and the other at the lowest right rib. At each menstrual period there would be secreted a fluid resembling cholesterin which would last four or five days and then disappear. I observed this case for about two years and then lost sight of the patient.

DR. JOSEPH B. DE LEE, Chicago: There is no doubt of the diagnostic value of the presence of milk in the breasts in pregnancy. All the text-books note that as one of the diagnostic signs as well as the associated mammary changes, particularly the expression of colostrum from the nipple. Very early in my own experience I found that sign so fallacious that I began to surround it with a great many qualifications. Surrounded by these restricting qualifications the sign still has a certain value in the differential diagnosis between pregnancy and other abdominal conditions. Absence of the mammary changes, however, is of more diagnostic value than the presence of the sign. It is reasonable to suppose, in a contested case, if the breasts show no changes after four or five months' observation that pregnancy does not exist. The presence of a small amount of colostrum can be demonstrated in a breast that shows no other changes and these other changes are more diagnostic than the colostrum. These changes are enlargement of the breast, increase of glandular tissue, puffiness of the areola, and the enlargement of the so-called tubercles of Montgomery.

DR. FRANK HINCHEY, St. Louis: The subject is of great interest from the medicolegal standpoint, but it has impressed me particularly from the point of the etiology of the milk secretion and the theory of Halban. His theory is interesting but it does not cover all the points in abnormal secretion. The abnormal secretion found in the male and female shortly after birth might, as he said, be due to some remains in the blood of the fetus of a placental or ovarian secretion circulating in the mother's blood, but it does not explain the presence of milk in the mature male breast. It is known that good biologists have reported cases in unimpregnated females and in male animals in which there could have been no placental stimulation on the one hand and no ovarian secretion on the other. In the male it might be supposed that the condition was due to hermaphrodism, or partial hermaphrodism, but investigators have eliminated that factor. Neither does Halban's theory explain the condition in animals that have no placenta, the mammals which lay eggs having a large yolk. These eggs are laid as the eggs of birds are laid and there is no placenta, therefore no placental stimulation, yet in them we have a milk secreted from the walls of the pouch, so that the theory fails to explain these interesting cases. I do not know that we can eliminate the question of stimulation from the nervous system, because in the case of transplanted breasts we no doubt soon have a connection with the nervous system, just as we have when skin is grafted. The nervous attachment becomes apparent in the grafted skin after a short time, by the production of sweating under the influence of nervous impulses, just as in normal skin elsewhere.

DR. GEORGE GELLHORN, St. Louis: I was so anxious to keep within the time allotted that I omitted to mention the curious phenomenon of the secretion of blood from the mammæ. Such instances have been observed by German and French investigators. The hysterical nature of these hemorrhages from the breast is of great practical importance because we must in these cases avoid operation.

47. Basch: Beitrag zur Physiologie der Milchdrüsen, Jahrb. f. Kinderheilk., 1906, lxiv, p. 795.

48. Rothschild, quoted from Halban: Arch. f. Gynäk., 1905, lxxv, 358.

Tuberculosis of the Testicle.—Delaup, in the *New Orleans Medical and Surgical Journal*, states that tuberculosis, whether apparently localized in the testicle or elsewhere in the body, is always a disseminated affection which can not be amputated. His choice of operation, therefore, is epididymectomy, unless the disease has progressed too far and the testicles can not be saved.

ABLATIO PLACENTÆ.

PREMATURE DETACHMENT OF THE NORMALLY SITUATED PLACENTA.*

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SYNONYMS.

Accidental Hemorrhage (Rigby, 1776), Premature Detachment of the Normally Situated Placenta, Ablatio Placentæ—Placenta Ablata (Holmes, 1901).

DEFINITION.

Ablatio placentæ is the separation, partial or complete, of the placenta from the upper uterine segment during pregnancy, or during labor before the completion of the second stage, due to some pathologic state of the uteroplacental union or violence done the organism.

FREQUENCY.

In spite of the close statistical study of obstetric complications in general, the subject of ablatio placentæ has been greatly neglected or ignored by obstetricians. In some clinics the condition has not been recognized; in others it is held to be of such rare occurrence that an example has not been observed in an enormous clinical experience; while in others it is not of very unusual occurrence. The wide disparity found in studying different hospital reports suggests that the discrepancies are due to faulty interpretation of symptoms or incorrect observation. In investigating this subject one can but be impressed with the enormous mass of literature on placenta prævia, and the relative paucity of material on ablatio placentæ. A considerable experience with antepartum hemorrhages has clearly convinced me of the fact that the latter is almost always mistaken for the former, especially if the placenta dips only slightly below the retraction ring.

Spiegelberg, one of the most diligent observers of obstetric anomalies, in his text-book describes placentæ which demonstrate clearly the presence of old blood clots on the maternal surface: sometimes these clots are firm dark particles of blood, varying in size from that of a small coin up to that of a hen's egg or even larger; again, the coagula may have been so old that the hemoglobin has been entirely absorbed, leaving a putty-like substance to denote the site of a former hemorrhage. Oftentimes, these clots are buried in a depression on the maternal surface of the placenta. In this connection, Brodhead was able to find 7 instances of such pathologic hemorrhage in 1,000 histories. These cases are merely of interest to the pathologist. On the other hand, the bleeding may be of such import that the woman and her child are placed in the sorest jeopardy. It is to such cases that I shall devote my description.

The Rotunda Hospital of Dublin in seven years had 74 cases of accidental hemorrhage (ablatio), with a ratio of frequency of 1 in 121.58. During the same period the staff observed 55 cases of placenta prævia—a ratio of 1 to 163.58. The Rotunda is the only clinic which meets ablatio more frequently than placenta prævia.

Hofmeier, of Würzburg, in Winckel's *"Handbuch der Geburtshülfe,"* maintains that ablatio is incomparably less frequent than prævia, and quotes Goodell to the effect that he could find only 106 examples in the literature, and that Brauns in 1893 could only get 51 additional cases. As Hofmeier, so nearly all writers, misled by the title of Goodell's paper, have blindly accepted the statement of Goodell of the excessive rarity, he being led astray by the nomenclature of Baudelocque, who introduced the name of "concealed accidental hemorrhage." Yet, of Goodell's 106 cases 27, or approximately 27 per cent. had external bleeding in the course of the disease. In my previous contribution on this subject I was able to collect 73 examples of concealed hemorrhage, which, added to the 78 of Goodell, makes a total of 151 of the absolutely concealed type. As I see it, absolutely concealed hemorrhage is exceedingly rare, but the patent examples are not so infrequent. The combination of the two types, absolutely and relatively concealed hemorrhages, probably occurs at least half as frequently as placenta prævia.

ETIOLOGY.

The causes of ablatio naturally fall into two general classes—the predisposing and the direct: The chief predisposing factors are age, multiparity, advance of pregnancy, and the physiologic structure of the serotinal portion of the placenta, and its site.

In my previous paper[1] I showed that in the three decades of the child-bearing period—that is, in the ages, 16 to 25, 26 to 35, 36 to 45—ablatio occurred 17, 53.7 and 29.8 per cent., respectively; the fact that only 10 per cent. of labors occur in the last decade is strongly suggestive. It was found that of the 156 women whose data were given that only 30 were primiparous, or 19.2 per cent.; as primiparous labors comprise 25 to 33 per cent. of all deliveries the relative immunity is evident. In 157 patients the length of gestation was as follows: 6 in the fifth month, 4 in the sixth, 29 in the seventh, 62 in the eighth, 52 in the ninth or at term. Read has shown that labor comes on at term in placenta prævia in only 19 per cent., while in ablatio, according to my figures, labor occurs at term in 33.1 per cent., or according to Goodell in 50.5 per cent. A great part of this may be dependent on the fact that with the advance of pregnancy, *pari passu,* the conditions increase which make the complication more severe, therefore, more easily diagnosticable. Jacquemier contended that the immense ramification of the uterine sinuses, and the relation to them of the small caliber of the ovarian and uterine veins predisposed to blood stasis: conditions which produced engorgements or congestions would tend to disrupt the delicate uteroplacental union. Cazeaux believed that the double placental circulation was operative: Gendrin thought that uterine contractions could cause the separation with the resultant hemorrhage. It is of interest that Hofmeier lends credence to this obsolete idea. Saenger very properly has disputed the contention of Gendrin.

The direct causes are of greater import and of more scientific worth. There may be no question but that ablatio may be directly due to violence applied to the abdomen, or to other parts of the body. No arbitrary rule may be laid down as to the severity of the trauma necessary to disrupt the uteroplacental union. We all know of women who have fallen down stairs, have been violently kicked or hit in the abdomen without any uterine reaction whatsoever: per contra, women have had very trivial injuries which have determined prema-

* Read in the Section on Obstetrics and Diseases of Women of the American Medical Association, at the Fifty-ninth Annual Session, held at Chicago, June, 1908.

1. Am. Jour. Obstet., 1901, xliv, No. 6.

ture labor or resulted in ablatio. I am firmly convinced that, barring certain severe contusions, especially of the abdomen, the usual accident attributed as the cause is merely contributory and subordinate to the pathologic uterine disease. J. Ramsbotham, long ago, put this clearly, and showed his prophetic mind by enunciating this: "The attack rarely follows the immediate application of a supposed injury; a lapse of some time usually intervenes."

PATHOLOGIC CAUSES.

It has been already shown that ablatio is peculiarly a complication of multiparous women of the second and third decade of the child-bearing period, which undeniably is due to the wide prevalence of metritis and endometritis. Just as such inflammatory processes bear a causal relation to metrorrhagia and menorrhagia, so the decidual endometritis which is a direct sequence often manifests itself in antepartum hemorrhages of the decidua vera and serotina. An old specific endometritis may be the foundation of the apoplexy of the pregnant uterus; a puerperal endometritis of one lying-in period or of a criminal abortion may account for the ablatio in a subsequent pregnancy. So the gonococcus, streptococcus and staphylococcus will often be the direct causal factor. Reinicke and Pick have found, as have others, sclerosis of the uterine arteries in the non-pregnant; if pregnancy should supervene in such sclerotic subjects, it is logical to believe that the atheromatous vessels may be the determining cause of a retroplacental apoplexy. Winter added much to our knowledge of the etiology of ablatio when he depicted the intimate relation between decidual and placental inflammations concomitant to renal inflammations. Hennig and Weiss corroborated this. One of my cases had such a complexus of pathologic findings. Rousseau-Dumarcet in 14 cases of ablatio had 11 with renal changes; likewise, in the Clinique Baudelocque the same combination was found in 24 of 31 cases. Further in my statistical study 20 reports showed some form of nephritis.

When we directly consider the placenta we find that it also is subject to inflammations which have an important bearing on the subject. Since the day of Rokitansky the profession has known of placentitis: he found placentæ with inflammatory infarcts, both with and without placentary hemorrhages. We all know how common is the fibrosis, the calcareous degeneration, and the fatty degeneration of the placenta. Kaltenbach and Veit both declare that all placentæ must have a serotinal inflammation to permit of a premature separation: Fehling and Schroeder declare that we must go further before we may substantiate the assertion that there is a difference between infarcts or inflammations accompanying albuminuria, and those in which the latter does not exist.

PATHOLOGIC ANATOMY—DYNAMICS.

Goodell attributed the blood retention in cases of absolutely concealed cases of ablatio to four causes:

1. When the placenta is centrally detached and the blood is restrained by a firm adhesion of the placental border.

2. When the adhesion of the membranes is such that blood accumulates between the uterine wall and the chorion.

3. When the membranes rupture near the placenta, and the effused blood commingles with the liquor amnii (there is no record of such a form)

4. When the presenting part so plugs the lower segment that blood may not escape.

I have added to this list instances of conglutinatio orificii externi. When the blood has been dammed up under the placenta for some time a distinct depression will frequently be found on the maternal placental surface; this depression may occupy a very considerable area of such surface.

The condition of ablatio closely resembles the mechanics of the typical abortion; this phenomenon is so strongly suggestive that we might well say that ablatio is an abortion in the latter months of pregnancy. We appreciate the fact that the usual abortion is ushered in by hemorrhage within the decidua, or between it and the uterine wall; the clot acts as a foreign body, stimulates contractions, and eventually the expulsion of the ovular mass. The analogy is perfect! In ablatio the retroplacental hemorrhage of slight degree determines a commensurate separation of the placenta to permit the formation of the cavity to contain the blood. Let uterine contractions occur: at once this imprisoned blood is compressed; the compression determines additional placental separation; the cavity, increased by this act, is filled by additional blood during the interval of contraction; and thus a mechanism similar to Schultze's mechanism for the third stage is inaugurated. If these small, repeated effusions of blood occur near the placental periphery, soon the border is reached, and the free blood, or more probably the serum expressed from the clot, finds its way to the os outside of the membranes.

SYMPTOMATOLOGY.

The sole pathognomic sign of ablatio is the local and systemic evidence of hemorrhage. The systemic effects of blood loss in ablatio are identical with those of other conditions associated with internal hemorrhages. If there be no external manifestation of bleeding the diagnosis may be difficult—but the diagnostician should always bear in mind that a patent bleeding is merely a corroboratory symptom of the premature detachment of the placenta. The cases which present either occult or patent bleeding offer such clear clinic pictures that one may well divide all cases into two types. Some seven years ago I was so impressed with this fact from a study of over three hundred case histories that I divided the cases into two classes, characterized by absolutely concealed and relatively concealed bleeding, respectively. That such a classification is a valid one all will admit who have studied this question from clinic experience and reading descriptions of the complication. The amount of blood which passes from the vagina is never commensurate with the amount which has left the woman's vessels. So far as my knowledge goes—and this is based on a very extensive review of the literature as already stated, and an experience of 9 clear, typical examples—every case which is characterized by external bleeding has more or less blood retained in the uterus. Further, from the brief review of the dynamics, it is clear that all cases begin with absolute concealment of the hemorrhage, and later may develop a patent hemorrhage. A cardinal principle in ablatio is that one never should gauge the jeopardy to the mother or child by the amount of blood which appears at the vulva—systemic effects alone must be considered. It is not inapt to state that the relatively concealed type is a terminal stage of the absolutely concealed form.

As a corollary to the hemorrhage are two signs of

great significance. One is the distention of the uterus, which may be diffuse or local. If local there will be a bulging of the uterine wall over the placental site; this is the so-called accessory tumor. As over one-half of all placentæ are on the posterior wall of the uterus, this sign may be elicited in less than half of the cases in which it is typically developed. The accessory tumor is the result of the retention of a large retroplacental hemorrhage with adhesion of the periphery of that organ. The uterus, which is equally distended, may be tense, hard like a contracting uterus, or may be flaccidly filled with retained blood. The other characteristic finding is the escape of a thin fluid from the vagina; this is the blood serum which has been expressed from the clot. This serum must not be confused with the liquor amnii, which it oftentimes closely resembles. In sharp contrast to the painless appearance of hemorrhage in prævia is the frequent precursory pain in ablatio. As in ruptured extrauterine pregnancy, so in ablatio, the first premonition of impending trouble is pain, or, perhaps, a synchronous feeling of faintness, nausea, or even entire loss of consciousness. The pain may be slight, diffused, or localized, and typically it is localized over the accessory tumor, if it be present; the pain is not infrequently of excruciating severity, with exacerbations if contractions be present.

DIAGNOSIS.

I take the stand that the difference between instances of absolutely concealed and relatively concealed hemorrhages is one of degree only, and that this difference is largely the difficulty of diagnosis. The two conditions are allied in their complexus of symptoms; there is not a sign or symptom of one which is not equally characteristic of the other, except that in the latter the bleeding is evident to the eye. Yet, if active uterine contractions set in, the obstruction which retains the blood may be swept aside, and an occult bleeding becomes evident. The graphic picture is the rather sudden onset of pain, nausea to actual emesis, possible brief tumultuous fetal movements; gradually the pain may become intense, of a stretching, bursting nature; the woman feels that her abdomen is distending; with the aggravation of symptoms unconsciousness may supervene, signs of anemia, the development of the accessory tumor, the escape of serum or of blood; the palpation of the placenta is utterly impossible by local examination. Further, with the expulsion of the child, or at any rate with the delivery of the placenta, there will be considerable amounts of dark clotted or fluid blood. Perhaps a depression which contains coagula may be found on the placenta; if the depression is absent, then, at least a portion of the placenta giving unmistakable evidence of the premature separation should be found; if some period of time has elapsed between the separation and delivery of the afterbirth, this separated area will be found darkened, of a markedly different color from the contiguous portions. The opening in the bag of waters will be at least three inches from the placental border.

Placenta prævia is diagnosticated by the palpation of the placenta, the onset of hemorrhage without premonition and without any pathologic pain; the presenting part is frequently dislodged from the inlet; if the prævia be a high lateral one a differentiation only may be made by a careful macroscopic inspection of the secundines.

In rupture of the uterus the accident is unusual before advanced labor; almost invariably there is the history of strong contractions with the sudden cessation as the rupture occurs. The presenting part recedes from the inlet, and if the rupture be extensive enough the fetus escapes into the abdominal cavity, which permits the palpation of the fetus with remarkable readiness. This is in sharp contrast to ablatio, for almost always in the latter the fetal parts are palpated with great difficulty, or palpation will be found quite impossible.

A fibroid only would be brought into consideration if the import of the accessory tumor were not recognized.

In simple vertigo or loss of consciousness from various causes there is no anemia, there is no pain; the picture of faintness is quite different from the cerebral anemia incident to a severe hemorrhage. If in doubt the hemocytometer and the hemoglobinometer will clear up all doubt.

PROGNOSIS.

In placenta prævia, other things being equal, the jeopardy to the mother and child varies directly as the degree of placental presentation; and this danger generally may be clearly predetermined. In ablatio the amount of placental separation present can not be estimated; in fact, we have no means of fixing this amount, neither have we any criteria as to how much further the separation may extend in the course of the treatment. At best, this fact is of relatively slight importance—our principal concern is the amount of blood lost, and its effect on the woman's bodily functions. This by careful observation may be fairly accurately fixed. As we have a broad field, from the pathologic examples recognized only by postpartum inspection of the placenta up to the fulminating cases terminating before aid may be secured, which have the uterus enormously distended with blood, we can not give an average mortality. In one there is no direct danger; in the other there is a death rate which exceeds any obstetric complication. In determining, therefore, the prognosis we must necessarily base our estimate solely on those cases which are of real clinic significance. In this class of patients the prognosis is dependent on the celerity with which the diagnosis is made, and the rapidity and skill used in the delivery. Goodell, in 1871, gave the mortality as 50.9 per cent. and 94.4 per cent. for mother and child, respectively. I found that there was a mortality respectively of 32.2 and 85.8 per cent. Of 39 absolutely concealed cases I found a mortality of 23 per cent; the fatality for 150 patent hemorrhages was 34.6 per cent. Goodell gave figures which undoubtedly are relatively more correct—52 and 41.3 per cent., respectively. I have had 9 severe cases of ablatio. Two patients died; one died directly after delivery, from the excessive anemia; the other, directly after the onset of the trouble, which first manifested itself by a flow of serum, had an eclamptic seizure; she reacted well from the hemorrhage, but died nine hours after the first sign from eclampsia.

TREATMENT.

I have convinced myself that he who will be aggressive in action will save most lives. When certain of the diagnosis means should be taken to deliver at once. The methods of dilatation appropriate for ablatio are curtailed by the fact that not only is the field of operation obscured by hemorrhage from the cervix, but the dislodgment of the presenting part or the rupture of

the membranes may bring forth the disconcerting and obscuring flow from the uterine cavity. Therefore, two methods are open to the obstetrician, manual and instrumental, the value of the latter being questionable. It is a fortunate circumstance that the cervix is usually peculiarly softened and the os dilatable in ablatio, due to the softening effects of labor, or the anemia, or both. As the eye is an unnecessary aid to manual dilatation, this method offers distinct advantages over the other procedures for dilatation. Vaginal Cesarean section would be an ideal method in those cases in which the cervix is still unprepared for delivery, if it were not for the blood escaping from the uterine cavity. Vaginal Cesarean section should not be performed when the operator can not see what he is doing. Again, the additional blood lost from the incisions might be just the amount which would determine the death of an already anemic woman.

When full dilatation is secured, version, forceps or craniotomy should be used, the choice being determined by the condition present. When version is elected, it should be borne in mind that extraction must be immediately performed; if delays occur in the course of the extraction, the partially emptied uterus may fail to contract, the actual cavity of the uterus may become filled with fresh blood, and this hemorrhage may be the direct cause of death. As when ablatio occurs nearly all the babies are dead from the asphyxia incident to the placental separation, the more general employment of the cranioclast is to be strongly recommended.

De Lee, in a recent communication, suggested the use of the Stowe bag, with the idea that the uterine cavity could be filled with saline solution, thus raising intrauterine pressure, restraining the effused blood until full dilatation was secured by hydrostatic pressure, when extraction could be carried out. The principles of the use of the bag are in a measure those suggested by the advocates of the tampon. The tampon and bag will convert the patent into an occult hemorrhage. The bag, like the tampon, is too slow and uncertain in its action. Theoretically, the tampon and bag will raise intrauterine pressure until it is as high or higher than that of the blood pressure, when bleeding will cease. This would be true clinically if the uterus were an inelastic cavity; but, as the uterus is a contractile organ, its cavity must be larger in the interval of contraction than during the height of its activity, so, no matter how much saline solution could be placed in the uterus, or how effectually the blood has been restrained, intrauterine pressure never could be raised to the point at which the uterus was full.

Abdominal section has been suggested and employed as a means of delivering the woman. For hospital patients who have actually rigid cervices this method offers far greater advantages than vaginal Cesarean.

If the placenta is not delivered with the child, then immediate manual removal should be employed, with the removal of all clots from the uterus. As the uterus is so constantly atonic during and after delivery, no time should be wasted in questionable methods of securing retraction and arrest of a possible postpartum hemorrhage, but the uterus and vagina should be tightly packed with antiseptic gauze. This is so important that I hold that cases of ablatio not given the benefits of a uterovaginal tamponade have not been adequately or properly handled. The excuse of some physicians that the gauze is not at hand is as nonsensical as for a man to say that he did not provide himself with a scalpel for a laparotomy.

I can not emphasize too strongly the absolute necessity of having an assistant who will use firm fundal compression during the extraction of the fetus and after the tamponade until the uterus is firmly contracted.

A few words concerning the routine treatment of hemorrhage: Saline solution should be given early, before delivery, while the preparations are being made for delivery, and afterward if it is needed. The amount of saline solution should be about double the estimated blood loss. The saline solution may be increased in efficiency by adding to it adrenalin solution—ten drops to the one or two quarts. General stimulants, such as strychnin, digitalis, coffee, camphorated oil, ether and whiskey, serve their purpose.

Finally I approach the question of ergot with some diffidence, for my opinion on the use of ergot in this one complication is at variance with that of my usual teaching, as well as that of others. The hemorrhage of ablatio is the one condition permitting the use of ergot before the uterine contents have been delivered. The ergot never must be given in full doses. The fractional doses of ten to twenty minims may be repeated two or three times in the course of an hour if the uterus be atonic. The atonic uterus is the sole indication; after delivery all these patients should be given full doses to secure a permanent retraction of the uterus.

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ABSTRACT OF DISCUSSION.

DR. JOSEPH B. DELEE, Chicago: Dr. Holmes has suggested the name of "ablatio placentæ" for the premature detachment of the normally implanted placenta to go alongside of the term of placenta prævia. Premature detachment of the normally implanted placenta is rather a long term. The term "ablatio," the English of which is ablation, did not appeal to me, however, because we use it to signify the carrying away of a part, whereas the intention in this connection is to give the idea of tearing loose. In the terms to cover the idea of premature detachment of the normally implanted placenta we wish to have, first, the idea of suddenness; second, the idea of prematurity; third, the idea of the normal position of the placenta; and fourth, the idea of violence. There is no Latin term that would go with placenta and cover all these points. I have made a diligent search and have spoken to several Latin scholars. The nearest approach to it is, *abruptio placentæ*, which means a tearing loose, a breaking away from. Dr. Holmes is right when he says that ablatio placentæ is more common than placenta prævia. In my experience it is a little over twice as common, there being fifty-nine cases of placenta prævia to twenty-six of ablatio placentæ. Not infrequently the placenta is located low in the uterus and a portion of the placenta is over the internal os, but beyond the reach of the finger. This becomes detached, so that we might perhaps speak of a mixed form; without doubt some cases of placenta prævia and ablatio placentæ are confused. When the discussion arises in regard to the interruption of pregnancy in the latter months of gestation in cases of chronic nephritis, the detachment of the placenta should be borne in mind and the danger of death of the child from this cause should be taken into consideration. I do not think that Dr. Holmes emphasized the question of shock sufficiently. Without doubt the shock is caused by the sudden loss of blood, but the rapid and painful distention of the uterus produces a condition of shock which is not commensurate with the amount of blood lost. The frequency of the accessory tumor I believe is exaggerated. I believe that treatment consists in the most rapid emptying of the uterus consistent with safety. If the patient is in a hospital and if the conditions for rapid delivery from below are not ideal, the abdominal Cesarean section

offers the quickest and safest method of emptying the uterus. If, however, a rapid dilatation of the cervix can be made, that is the ideal treatment. If the patient continues to bleed a firm tampon should be placed in the uterus. I have performed vaginal Cesarean section three times with success in cases of abruptio placentæ.

DR. S. STRAUS, New York: I think that vaginal Cesarean section is the method *par excellence* for emptying the uterus in almost every case of this kind. By this method the operator has the field of operation directly under his eye. In one case of hemorrhage in a pregnant woman following accident in which separation of the placenta was caused there was immediate shock. The condition was recognized from the symptoms of anemia, and investigation showed that the uterus was closed with no evidence of external hemorrhage. The woman was a multipara. I saw her about two hours after the accident and delivered her easily by vaginal Cesarean section.

DR. O. S. MCCOWN, Memphis, Tenn.: In November, 1907, I had two cases of ablatio placentæ in private practice. The first case was that of a woman, aged 28, in a third pregnancy. The two previous pregnancies had been normal and had terminated normally. I had examined the urine of this patient two weeks previous to the time I was asked to see her and had found it normal. I was sent for at midnight and found the woman in labor, but with an elevated temperature and a fast pulse of low tension. The physical examination revealed nothing except the absence of the fetal heart sounds. The cervix was dilated nicely. The pains were as they should be, and labor apparently was progressing in a normal manner. In the course of an hour the nurse called my attention to the fact that there was some bleeding. Investigation showed that it was not a case of placenta prævia, and I diagnosed it as premature separation. Delivery was done as quickly as possible without help and the child was found to be dead. This was at the seventh month, and the skin slipped off. The woman was evidently septic at the time. The patient died on the fifth day without ever having an ounce of urine in the bladder. There was never enough urine in the bladder to make an examination of. The second case, which occurred almost in the same week, was that of a woman, aged 33, in her third pregnancy. The two previous pregnancies had been marked by pain in the arms and shoulders and were terminated in a normal manner with living children. I had seen her in these pregnancies and had made the diagnosis of a mild grade of toxic neuritis. I found nothing abnormal in the urinary examinations. At the eighth month I was sent for and found the woman in labor. The abdomen was greatly distended, and the distention was uniform. The general condition was good, as was the pulse. It was said that two weeks before she had felt acute lancinating pain. I made the diagnosis of internal hemorrhage with probably premature separation. Delivery was accomplished, but the baby was dead, evidently dead before I saw the patient. The whole mass of the placenta and the body of the child came at once with an enormous quantity of clots and liquid blood. After forty-eight hours the urine began to come, and, while it was highly albuminous, it gradually increased in quantity, and the patient went on to a good recovery. I must admit that according to Dr. Holmes' idea of the use of the tampon, I was negligent in this case, but I was fortunate enough to get firm uterine contraction and absolutely no postpartum bleeding. In the first case the placenta was separated probably during the labor. In the second case I am certain that the separation was accomplished long before the woman had gone into her labor and before I saw her. But in each case the retraction was quite firm, and the result, so far as the women were concerned, was all that could be wished for immediately following the delivery.

DR. I. F. HARTER, Stronghurst, Ill.: I was called last August in consultation with a confrère, who had been called to the case perhaps a week before. He had found the woman with some lancinating and irregular labor pains. This was her fourth pregnancy; the three previous ones had been normal and she was at this time about seven months advanced. At the time he was called in, she was somewhat anemic and he put her to bed. Along with the uterine tumor he observed a tumor about the right horn of the uterus and the right tube, which he thought, perhaps, was an ectopic pregnancy. As the time advanced the tumor increased in size and I was finally called in. From the shock from which the woman was suffering, I was convinced that there was concealed hemorrhage. The tumor was very large and conical-shaped in the right horn and tube. The woman was in poor financial circumstances, the husband a farm hand, and they were living under very unsanitary conditions. On the recommendation of Dr. J. F. Percy of Galesburg, we removed the patient to the Galesburg Hospital, where she could be constantly watched. She remained in about the same condition for about four or five days; then labor came on and she was delivered of a seven months' baby, and immediately following a large amount of blood and clots was expelled, which confirmed our diagnosis.

DR. F. D. MARSHALL, Chicago: The patient whom I have in mind was seen in the fourth labor. On examination I found everything normal. The presentation was left occipito-anterior and with no indication of placenta prævia. Fifteen minutes after preparation had been made for the delivery, the patient had a profound hemorrhage. She then told me that she had had about an hour before a sharp pain in the left side up near the fundus. What had happened, was the query in my mind, to cause this premature separation of the placenta. She had been suffering for a number of days with a severe attack of bronchitis, with a cough so spasmodic that it was almost unbearable. I recognized that there was a partially detached placenta. There was little time to spare. I gave her a full dose of ergot. The membranes were ruptured and with the normal presentation the delivery was completed within fifteen or twenty minutes without resort to version, forceps delivery or anything of the kind. In this case the first examination gave no evidence of hemorrhage. The second examination showed that a very large quantity of blood had been discharged. If there had been any delay in the coming down of the head I should have performed podalic version and delivered in that manner. Promptness is the means by which most of these patients will be saved.

DR. R. W. HOLMES, Chicago: I have had three cases with characteristic developments of the accessory tumors. In one case the intern thought that it was a case of twins. I thought so until I inserted my hand and found a baby in one horn and an enormous blood clot in the other. I maintain that vaginal Cesarean section should never be done blindly. Any man who has had a case of ablatio placentæ with the large amount of blood escaping and obscuring the field of operation, knows that vaginal Cesarean section can not be done safely or well under such conditions. If there is no hemorrhage, a condition which, however, almost never occurs, vaginal Cesarean section is the scientific procedure.

THE DIURETIC ACTION OF ADRENALIN AND THE ACTIVE PRINCIPLE OF THE PITUITARY GLAND.*

E. M. HOUGHTON, PH.C., M.D.,
AND
C. H. MERRILL, M.D.
DETROIT.

Many speculations have been indulged in by scientists to account for the physiologic function of the pituitary gland. This is especially true of the posterior or infundibular portion which in the human being is connected by a stalk with the tip of the infundibulum, and embryologically is to be regarded as an outgrowth from this part of the brain. This portion of the pituitary body, according to Berkeley, is very complex in its histologic structure; it contains many nerve cells, neu-

* Read in the Section on Pathology and Physiology of the American Medical Association, at the Fifty-ninth Annual Session, held at Chicago, June, 1908.

roglia tissue and a large quantity of glandular-like epithelial cells, which are so arranged as to form elongated vesicles or tubes, some of which contain a colloidal material. This structure suggests a secretory function.

Several writers have demonstrated by physiologic experiments that when extracts of this tissue are injected into the vein of anesthetized animals certain interesting changes occur in the circulatory system. Some of the earlier experiments were contradictory, but the experiments of Howell have often been confirmed by others and repeatedly by ourselves.

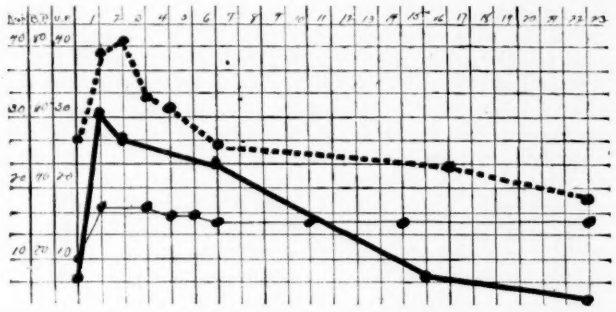

Fig. 1.—Chart showing results obtained from adrenalin. The figures in the three columns to the left indicate the respiratory rate, blood pressure in mm. Hg and urinary flow in drops, respectively. Dots indicate when observations were made. Broken line, blood pressure; light line, respiratory acceleration; heavy line, increase in ureteral flow.

The action produced is very similar to that following like administrations of adrenalin. The blood pressure is markedly raised chiefly by peripheral stricture. In the case of adrenalin this action is very transient, while with the pituitary material the blood pressure remains elevated much longer, in some cases a half hour or more. Howell points out the fact that repeated injections were followed by less and less rise of blood pressure until finally there was practically no response at all. This is well brought out in Figure 8. The pulse rate is slowed even when the vagi are cut or atropin has been administered, and the heart beats stronger than before.

For the experiments outlined in this paper we have

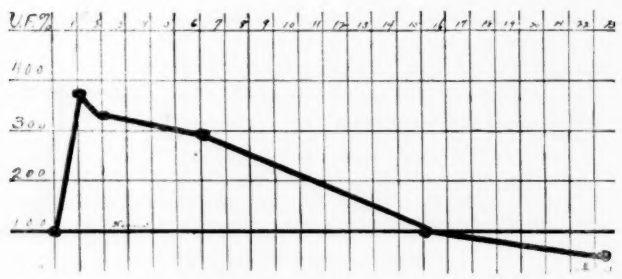

Fig. 2.—Chart showing average urinary curve for five dogs receiving .00001 gm. adrenalin in 5 c.c. saline solution and injected into the femoral vein. Figures at the left show percentage of increase of urinary flow. Figures at top indicate minutes.

employed an extract prepared by our colleague, Dr. T. B. Aldrich, using the method given in a paper read before the American Physiological Society, which he describes as follows:

PREPARATION OF EXTRACT OF INFUNDIBULAR BODY.

The infundibular portion of the pituitary body is carefully separated from the hypophysis cerebri and ground to a very fine pulp. To this, which constitutes about 8 per cent. of the weight of the moist gland, acidulated water (twelve times its weight) is added, and the mixture gradually heated to about 90 C. A portion of the proteid matter is coagulated by this procedure and removed by filtration. The remaining proteid, together with the phosphates, is removed for the most part with a solution of uranium acetate. The filtrate is practically without color and free from proteid. It represents the extract that has been used in the physiological experiments. One c.c. of such an extract, when injected intravenously into a dog, causes a rise of from 15 to 45 mm. of mercury and represents 0.1 gm. of moist infundibular body or 0.01 gm. of dry. Since there is considerable inorganic matter present, the active body in 1 c.c. must be much less than the above. I think I am safe in saying that the active substance in 1 c.c. of such an extract is not more than 1/32 of a grain. In all my experiments, extending over some months, in which thousands of glands have been used, I have found such extracts, for the most part, very uniform in their physiologic action when injected intravenously.

From this concentrated extract Aldrich also reported having obtained a crystalline picrate and a sulphate in solution, which were found extremely active in producing a rise in blood pressure. We have conducted extensive experiments which showed positively that this material is practically non-toxic when given internally or injected subcutaneously into guinea-pigs or rabbits or injected into the abdominal lymph sac of frogs.

The purpose of this paper, however, is to consider more especially the influence of the pituitary material on the secretion of urine. Professor Shafer in a recent paper makes the following statements:

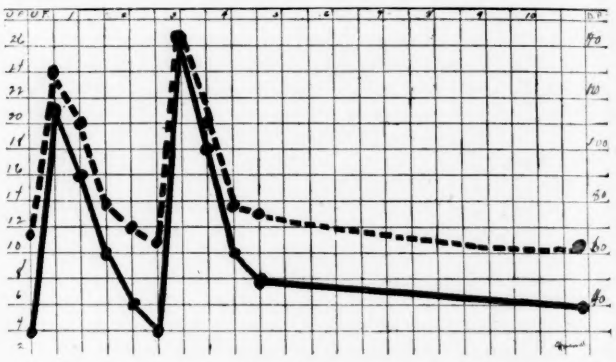

Fig. 3.—Chart showing that the increase in urinary flow (heavy line) follows very promptly on the repetition of the dose of adrenalin. The broken line indicates the blood pressure; the injections were made at 0 and at 2½.

INFLUENCE OF PITUITARY MATERIAL ON URINE SECRETION.

Pituitary extracts contain another hormone, the action of which is even more interesting than that which affects the heart and vessels. This second hormone has been found by Dr. Herring and myself to have a specific effect on the functions of the kidneys and to promote a free flow of urine—even if, as is often the case with animals under anesthesia, the urine may for a time have ceased to flow. Preceding or accompanying this increased flow of urine the kidneys expand, owing to the dilatation of the arterioles, so that the pituitary extract, while producing vascular constriction throughout the body generally, produces in the kidney vessels the opposite effect. This by itself must greatly assist the formation of urine.

But it is certain that, apart from the physical assistance to the formation (filtration) of urine derived from the increase of blood pressure and blood flow within the kidney, which it produces, pituitary extract also has a specific exciting effect on the cells which secrete the urine. In other words, although ordinarily accompanied and aided by a rise of general arterial pressure, due to general arterial constriction, and by expansion of the kidney vessels, due to local dilatation, the increased secretion of urine is essentially due to the glandular cells of the organ being stimulated to activity by the agency of a specific hormone.

This is proved by the fact that if a "repeat dose" of pituitary extract be given—which, as we have seen, is inactive so

far as the rise of blood pressure is concerned—marked increase in the rate of flow of the urine can still be obtained. This may be accompanied by dilatation of kidney vessels, but, on the other hand, such dilatation may not occur at all—so that it is clear neither the kidney dilatation nor the rise of blood pressure are essential to the diuretic effect of pituitary extracts, which is due, therefore, to the presence of a special hormone. . . . That the internal secretion of the pituitary acts normally in promoting the functions of the kidneys there can be little doubt. This is, indeed, confirmed by the frequency with which polyuria is mentioned as a symptom in cases where the pituitary has, on postmortem examination, been found to be enlarged.

DETERMINATIVE EXPERIMENTS.

Three series of experiments were undertaken to determine if possible the reason for the diuretic action produced by the active substances of the infundibulum as reported by Shafer.

Observations were made on the excretion of urine by two normal individuals, care being taken during the periods of observation, which extended over several days, that the food, drink and habits and the periods of work, exercise, etc., should be the same. After the normal excretion of urine had been determined by careful observation, relatively large doses of the pituitary extract were given internally, with the result that, apparently, there was a slight increase in the amount of urine voided during the periods of observation, which corresponded to those of the normal. The results, however, were inadequate to establish the positive fact that the material produces any marked diuretic influence on persons in health. Observations were likewise attempted on dogs, but the results were even more irregular than those obtained in the experiments on human beings, so it was concluded necessary to make additional observations by more refined laboratory experiments. Owing to many interruptions, however, and absence from the laboratory on pressing matters, the experiments have not been as exhaustive in character as was at first intended; in fact, this report may be looked on as one of progress merely to be amplified and completed by subsequent work.

A series of dogs were anesthetized by morphin and chloretone. Cannulæ were placed in the ureters for measuring the outflow of urine from the kidneys, the individual drops being recorded on the kymograph (Fig. 4) through electric connection.[1] The carotid artery was connected with a mercury manometer so that records could be made directly on the drum of the kymograph (Fig. 4). The respiratory movements were also recorded on the kymograph (Fig. 4). The three connections were not made in all of the experiments, as it was deemed unnecessary.

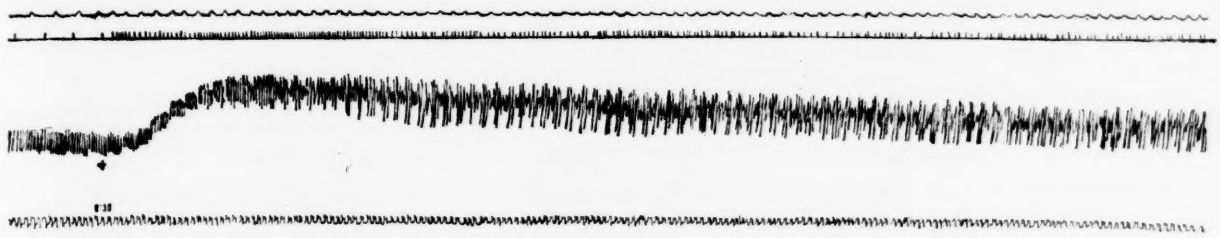

Fig. 4.—A typical kymographic tracing from which the analytical charts have been prepared. Top line, respiration; second line, water flow; third line, blood pressure; bottom line, time in seconds.

Fig. 5.—Chart showing the average urinary flow from five dogs receiving the pituitary extract in the vein. Figures at the left, percentage of increase; those at the top, time in minutes.

Reference to Figure 4 will show the manner of recording the experiments. The upper tracing is the record of the respiratory movements. It was intended only to register the number—not the character—of the respirations. Immediately below, a tracing records the drops of urine flowing from the ureteral cannula, each perpendicular stroke indicating a drop of urine. The next tracing below is the record from the carotid artery. At the bottom is the time record in seconds. Immediately above the actual time of the observation is recorded in numerals. The experiments showing the action of adrenalin and pituitary extract were carried out in precisely the same manner.

1. See explanation accompanying the chart in Figure 4.

The chart in Figure 1 indicates in a characteristic way the results as obtained from adrenalin, being transferred from the kymograph sheet to the tracing cloth and the analytical data expressed in numerals. The three columns of figures at the left-hand side of the sheet indicate the respiratory rate, urinary flow in drops and blood pressure in millimeters of mercury, respectively. The figures at the top of the sheet indicate the time from the beginning of the experiment in minutes. The dots on the lines indicate the time at which observations were made. It will be observed that the blood pressure (broken line) rose very sharply from 56 to 88 millimeters of mercury, but within six minutes from the beginning of the experiment had fallen back to normal. This is characteristic of the blood-pressure action of adrenalin when administered intravenously. The light line indicates the respiratory acceleration. The heavy line shows the increase in ureteral flow from 8 minims per minute to 30 minims per minute, the maximum increase in flow corresponding fairly closely in time with the maximum blood pressure. The increase in urinary flow, however, continues for a much longer time than the increase in blood pressure, at the end of fifteen minutes the flow being approximately the same as at the beginning of the experiment.

The chart in Figure 2 shows the average urinary curve for five dogs receiving administrations of 1/100,000 of a gram of adrenalin dissolved in 5 c.c. of saline solution and injected into the femoral vein. The figures at the left-hand side of the sheet indicate the percentage of increase of the urinary flow, while the time from the beginning of the experiment in minutes is given at the top.

It will be observed from the charts in Figures 1 and 2 that the increase in the flow of urine corresponds quite closely to the rise in blood pressure but that the flow continues above normal for some minutes after the blood pressure has reached normal.

Experiments were undertaken after the technic of Sollmann[2] to determine the action of the pituitary extract on the secreting cells of the isolated kidney. Cannulas were placed in the renal vein and ureter and determinations made of the flow of blood from the cannula in the vein and the amount of urine secreted and flowing from the cannula in the ureter, record being kept from time to time. The kidneys were placed in a saline solution kept at body temperature; likewise, the fluid for perfusing the kidney was warmed beforehand; apparatus was arranged so that perfusion could be carried out at 50 and 100 mm. of mercury pressure; the experiments being undertaken to determine whether the pituitary extract had a specific influence on the secreting cells of the kidney or whether the increased flow of urine observed in animals receiving intravenous injections of pituitary extract was merely dependent on the increased blood pressure produced. The following tables will give the details of the experiments:

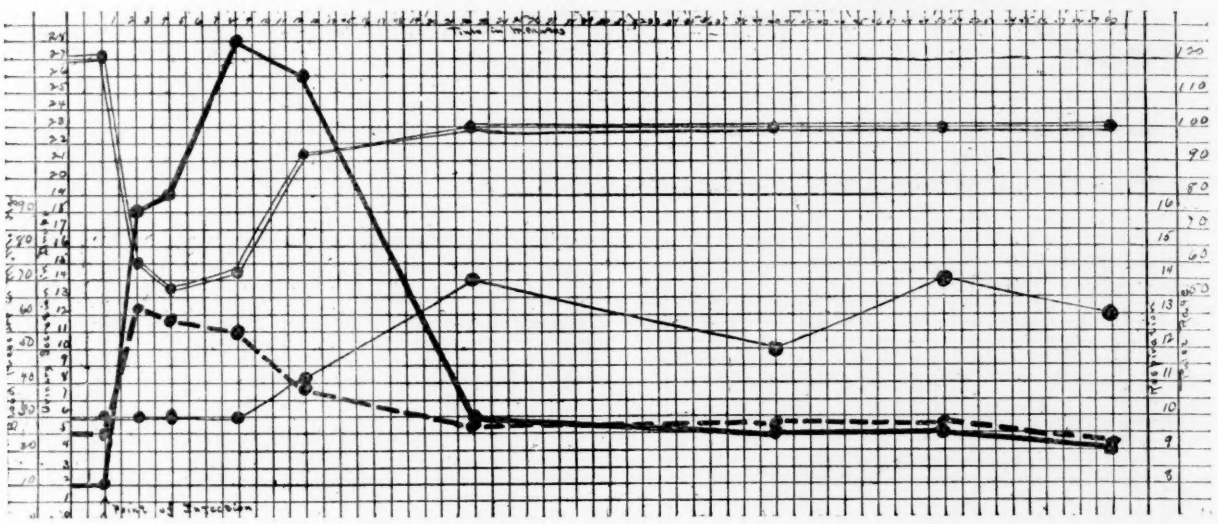

Fig. 6.—Chart showing the result of one experiment with pituitary extract on the respiration, blood pressure, pulse rate and urinary secretion of an anesthetized dog. The numerical values of the tracing are indicated at the right and left sides of the sheet. Heavy line, ureteral flow; broken line, blood pressure; light line, respiration; double line, pulse.

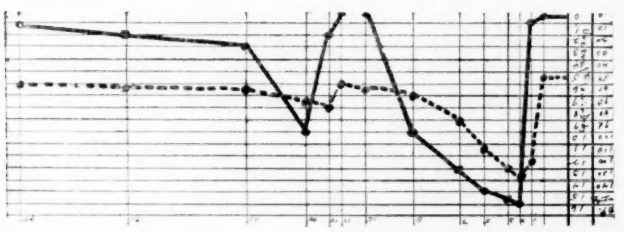

Fig. 7.—Chart showing the action of pituitary extract in repeated doses. Note that the blood pressure rises much less after the second injection, while the increase in urinary flow is very marked, but still less than after the primary injection. Heavy line, ureteral flow; broken line, blood pressure; injections at 0 and 17 mins.

TABLE 1.

SHOWING EFFECT OF INTRAVENOUS INJECTION OF PITUITARY EXTRACT.

Time.	B.P. in mm. Hg.	Pulse per min.	Resp per min.	Urine, drops per min.
Normal	30	96	6	5
8:35*	..	..	..	..
8:35½	55	84	10	52
8:36	63	74	14	62
8:40	45	66	14	28
8:45	36	74	10	26
8:50	33	78	8	18
8:55	32	92	8	14
9:00	32	98	10	12
9:05	32	104	10	10
9:15	31	108	8	6

* At 8:35, 2 c.c. pituitary extract injected intravenously.

2. Am. Jour. Physiol., February, 1908.

TABLE 2.

Time.	Ureteral Flow.	Venous Flow per Minute. in Minims
10:00	A. Kidney perfused with 1 per cent. saline at 50 mm. mercury pressure.	
10:01	.....	14
10:03	.....	14
10:06	4 minims per minute.....	10
10:21	B. Pressure raised to 100 mm. mercury.	
10:21	12 minims per minute.....	50
10:24	11 minims per minute.....	25
10:27	C. Pituitary extract, 1½ mg. to 0.0015 gms. per c.c. of saline. Pressure 100 mm. mercury.	
10:28	12 minims per minute.....	20
10:31	6 minims per minute.....	26
10:36	5 minims per minute.....	21
10:37	D. Blood pressure lowered to 50 mm. mercury.	
10:39	2 minims per minute.....	35
10:40	1 minim per minute.....	20
10:42	E. Saline, 1 per cent., used instead of pituitary extract solution.	
10:44	Zero	12
10:48	Zero	12
10:49	F. Pituitary extract added as before.	
10:51	Zero	12
10:58	Zero	8½
11:01	Zero	8½
11:05	G. Raised pressure to 100 mm. mercury.	
11:06	Zero	25
11:07	3 minims per minute.....	56
11:14	3 minims per minute.....	45
11:17	3 minims per minute.....	35
11:22	H. Pituitary extract withdrawn and 1 per cent. saline introduced.	
11:22	3 minims per minute.....	40
11:23	3 minims per minute.....	40
11:33	2 minims per minute.....	30
11:43	4 minims per minute.....	42
11:45	4½ minims per minute.....	46
12:44	I. Pituitary extract added as before.	
12:47	4 minims per minute.....	80
12:50	4 minims per minute.....	90
1:05	2 minims per minute.....	100
1:35	1 minim per minute.....	100
1:41	J. Saline, 1 per cent.	
1:55	1¼ minims per minute.....	96

TABLE 4.

Time.	Ureteral Flow.	Venous Flow in Minims per Minute.
10:20	A. Saline, 1 per cent., at 50 mm. mercury pressure. Perfusion of fresh kidney.	
10:23	.....	6
10:27	.....	5
10:32	1½ minims per minute.....	5
10:40	1½ minims per minute.....	6
10:45	1½ minims per minute.....	5½
	B. Raised to 100 mm. mercury pressure.	
10:46	6 minims per minute.....	75
11:00	1 1/5 minims per minute.....	15
11:05	1 1/5 minims per minute.....	..
	C. Lowered to 50 mm. mercury pressure.	
11:09	.....	7½
11:25	1 minim per minute. (Flow very slow both sides.)	
11:33	D. Pituitary extract. 50 mm. pressure. (1 mg. to 3 c.c., 1 per cent. Saline.)	
11:35	1 1/5 minims per minute.....	..
11:40	1½ minims per minute.....	7
11:41	E. Raised to 100 mm. mercury pressure.	
11:42	4 minims per minute.....	15
11:45	5 minims per minute.....	15
11:54	5 minims per minute.....	15
11:55	F. Lowered to 50 mm. mercury pressure.	
11:56	2 minims per minute.....	6½
12:00	1¼ minims per minute.....	6
12:05	1 1/5 minims per minute.....	5

From these tables it will be observed that at 50 mm. mercury pressure a 1 per cent. physiologic salt solution produces but a slight flow of urine through the ureter. When the pressure is increased to 100 mm. mercury, both the urethral and venous flow is markedly increased. The same general fact is observed when pituitary extract is added to the saline perfusion, but the urethral and venous flow is less, both at 50 mm. of mercury and at 100 mm. of mercury than where saline alone is used.

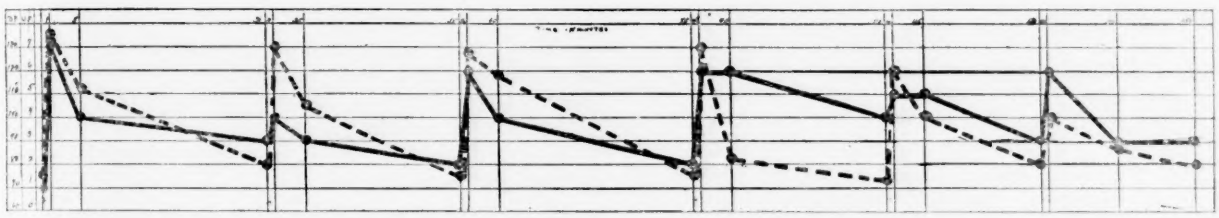

Fig. 8.—Chart showing the effect of repeated intravenous injections of pituitary extract on the blood-pressure and urinary secretion of anesthetized dogs. Heavy line, ureteral flow; broken line, blood-pressure; injections at 0, 31, 55, 85, 110, 130 minutes.

TABLE 3.

Time.	Ureteral Flow.	Venous Flow in Minims per Minute.
3:30	A. Saline, 1 per cent., at 100mm. mercury pressure.	
3:31	18 minims per minute.....	36
3:34	12 minims per minute.....	30
3:36	12 minims per minute.....	26
3:37	B.—D. F. Blood at 100 mm. mercury pressure.	
3:38	.....	24
3:40	4 minims per minute.....	16
3:45	5 minims per minute.....	10
3:46	8 minims per minute.....	12
3:46½	4 minims per minute.....	12
3:50	4 minims per minute.....	10
3:55	4 minims per minute.....	10
4:00	3½ minims per minute.....	14
4:05	3½ minims per minute.....	14
4:10	2½ minims per minute.....	14
4:25	1½ minims per minute.....	12
4:26	C. Lowered to 50 mm. Mercury pressure.	
4:30	Practically blocked.	
4:35	.....	2
4:38	.....	1½
4:40	D. Pituitary extract at 50. mm. mercury pressure.	
4:45	1¼ minims per minute.....	1⅓
4:50	2 minims per minute.....	3
4:55	1⅓ minims per minute.....	5
5:00	E. Pituitary extract at 100 mm. mercury pressure.	
5:01	3 minims per minute.....	40
5:05	2½ minims per minute.....	50
5:10	2½ minims per minute.....	46

CONCLUSIONS.

From these experiments it would seem to us that the explanation of the increased urinary flow in anesthetized animals depends chiefly on the increase in blood pressure produced by the intravenous injection of the adrenalin solution or the pituitary extract in solution rather than on a specific action on the secreting cells of the kidney. It is possible, however, that a specific action on the kidneys occurs, but if so it is less marked than in the case of the 1 per cent. saline solution.

Macroscopic observation of the perfused kidney indicated that there was considerable enlargement of the organ while the experiments were being carried out. This would assist in the more rapid secretion of urine, especially if accompanied by increased pressure, but, as just stated, there is not the same degree of relaxation or dilatation of the blood vessels in the kidney as follows the perfusion with the saline itself. This is as we would expect, since experiments on the web of the frog, on the inflamed conjunctiva of the rabbit and other animals show positively that the pituitary extract does narrow the caliber of the arterioles.

If the pituitary extract possesses, as Shafer believes, the specific secretory effect, it would seem to us that it

should manifest itself by greatly increased flow of urine when brought in contact with the secretory cells of the kidney. If it does have this specific action it has it to a much less degree than sodium chlorid itself.

THE TREATMENT OF TUBERCULOSIS BY THE ADMINISTRATION OF MERCURY

AT THE UNITED STATES NAVAL HOSPITAL, NEW FORT LYON, COLO.

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COMPARISON OF TUBERCULOSIS AND SYPHILIS.

Both tuberculosis and syphilis are classed by pathologists among the infectious granulomata. The pathologic histology of the two diseases are so similar as to be almost identical. I venture to say that a microscopic diagnosis between a gumma and a tubercle is almost impossible in many instances unless the specific microorganism of one or the other disease be found in the tissue under examination.

In both diseases the pathologic lesions are represented by a round-cell infiltration of the affected tissues. In both cases the lesions may vary in size from that of a pin-head to a large mass or tumor.

Stengel's Pathology (1906) says of the tubercles (p. 278): "Tubercles tend to coalesce, forming larger tubercular masses, and sometimes distinct tuberculous tumors are so produced." Of gummata the same work says (p. 311): "The gumma presents itself as a nodular mass, varying in size from small tubercle-like formations (miliary gummata) to tumors the size of an orange or larger." In regard to the pathology of syphilis of the lungs, Stengel writes: "It has been the occasion of much dispute whether the many forms of disease attributed to this cause can be really so classified. Undoubtedly some of the conditions attributed to syphilis are cases of tuberculosis or of some other form of pulmonary disease."

Stengel writes of the Lustgarten bacillus as follows (the edition of 1906 is cited in all these quotations): "The attempts to find a specific cause for this disease (syphilis) have not as yet met with definite success. The organism which until very recently had the best claim to recognition is that observed by Lustgarten. This resembles the tubercle bacillus very closely." I shall refer to the Lustgarten bacillus later.

Tuberculosis is a chronic, infectious, granulomatous disease, characterized pathologically by a round-celled infiltration of the affected tissues or organs, and symptomatically by various symptoms common to all debilitating diseases which tend toward cachexia. If the word "syphilis" be substituted for "tuberculosis" in the above definition, the characterization seems to be accurate.

A study of the pathology of both diseases will show their close relationship from this standpoint. Their symptomatology, closely observed, does not reveal any wide differences except the early symptoms of syphilis (the chancre and early secondary lesions). This similarity is especially noticeable in the comparison of these diseases occurring in the same organs or tissues. In the late secondary or tertiary stages, without an absolute syphilitic history, unless the specific organism of one or the other disease be found, or one of the tuberculin tests be applied, a differential diagnosis is often impossible.

THE LUSTGARTEN BACILLUS.

From the present point of view it appears probable to me that the authentic cases of syphilis in which Lustgarten and others found his bacillus were complicated by tuberculosis; that the bacillus found in the lymph glands and channels, in the blood, and in the various organs were tubercle bacilli; and that the lesions in these organs or tissues were of mixed origin. That these organisms disappeared under mercury was, at that time, a strong argument that they were the bacilli of syphilis. During the six months in which we have treated tuberculosis at the naval hospital with mercury we have seen the tubercle bacillus rapidly diminish and disappear from the sputum. Since it is now definitely established that the *Treponema pallidum* is the specific cause of syphilis, it would appear probable that the disappearance of the Lustgarten bacillus under mercury in certain cases occurred because this drug had a pronounced antituberculous as well as antisyphilitic action.

The text-books on therapeutics teach that the administration of mercury is contraindicated in debilitating diseases tending toward a state of cachexia; yet for years we have treated syphilis with mercury, and I do not think any one will question that this disease occupies a prominent position in this class of diseases.

RESULTS OF TREATMENT.

During the past six months we have not found a single tuberculous patient whom mercury injured in the least; on the contrary, in over 85 per cent. of all the cases so treated an improvement has taken place, and in most instances this improvement was decidedly marked, not only from the point of general condition, but the diseased pulmonary area was greatly reduced. Nor has this improvement been confined to the diseased lung, for we have cured a number of patients with secondary tuberculous laryngitis, one with secondary tuberculous epididymitis and one with secondary tuberculosis of the kidney and prostate.

My attention was first drawn in the spring of 1905 to the antituberculous action of mercury. At that time I was on duty at the U. S. Naval Hospital, Pensacola, Fla., having a camp for the treatment of tuberculosis as an adjunct. We had several cases with a mixed infection of tuberculosis and syphilis, the latter disease being in the early secondary stage, with the characteristic skin eruption present on admission, and with a profuse mucopurulent expectoration, which in both instances contained numerous tubercle bacilli. Physical examination revealed extensive pulmonary involvement, and both were running high temperatures.

The patients were placed on mercury and both improved with astonishing rapidity. The temperatures soon fell to normal and the physical evidences of syphilis quickly disappeared. The patients gained weight rapidly, the tubercle bacilli in the sputum rapidly diminished, cough and expectoration were much lessened, and physical examination of the lungs revealed a remarkable improvement in the condition of these organs.

This led me to believe that mercury must have some pronounced antituberculous action. A study of the pathology and symptomatology of syphilis convinced me that this thought was not unreasonable.

I then placed about twelve tuberculous patients, whom I thought free from syphilis, on mixed treatment by mouth, obtaining excellent results in most instances.

About this time I was detached from duty at the

hospital and ordered to sea, which prevented further work in this line.

In January, 1908, having been ordered to duty at the U. S. Naval Hospital, New Fort Lyon, Colo., I resumed the experiment, now giving mercury by deep muscular injections, in order to avoid the derangement of the gastrointestinal tract which had given my earlier patients considerable annoyance.

The results of this method of treatment were reported to the Surgeon-General, U. S. Navy, under date of March 1, 1908, and were published by the Bureau of Medicine and Surgery in the April number of the *United States Naval Medical Bulletin*.

A second and more elaborate report, submitted under date of May 25, 1908, appeared in the July number of the above magazine. In this paper I considered forty cases with 70 per cent. improved, in many of which the improvement was marked.

A third paper, under date of July 28, 1908, appeared in the *New York Medical Journal*, Aug. 29, 1908.

During the first quarter, ending March 31, 1908, our death rate was 11.29 per cent.; during the following quarter, ending June 30, the death rate was 4.76 per cent., or a reduction of 42 per cent. I think this great reduction in the death rate most significant. To my mind it clearly establishes the specific nature of mercury in relation to tuberculosis.

During the present quarter, ending September 30, we have had but one death, with a daily average of 105 patients, giving a death rate of 0.95 per cent., or a reduction in the death rate over the previous quarter of 80 per cent. and over that of the quarter ending March 31 of 91 per cent.

This would seem to be the best evidence that the reduction in the death rate during the second quarter was not accidental but entirely due to the administration of mercury. It emphasizes in a marked degree the antituberculous properties of the drug and strengthens my convictions as to its specific qualities, expressed in my second report.

These results appear all the more remarkable when we consider the fact that over 60 per cent. of the patients on admission are far advanced, in many of whom grave secondary involvements complicate the serious pulmonary lesions.

During the past five months all the deaths but one have been those of patients who have been in the hospital less than two months. Autopsy in all cases revealed extreme pulmonary involvement, secondary ulcerative tuberculosis of the intestinal tract and larynx and tuberculous involvement of many of the internal organs.

We began this treatment about seven months ago, and so far the results have been so exceedingly and uniformly good as to warrant us in regarding mercury as a strong antituberculous agent, if not a specific in this form of disease. We have now ten officers and fifty-seven enlisted men who have been on mercury for two or more months. Of the ten officers so treated all have improved, nine with remarkable rapidity. One failed for the first few months but is now improving.

Of the total number of patients under treatment, 86.5 per cent., or fifty-eight, have improved. Two of these have been cured, and in many of the others the improvement has been exceedingly marked.

Of the two cured one has been restored to duty and is serving on board the U. S. S. *West Virginia*. The other ceased taking mercury some two months ago, since which time he has been employed in the stables at this hospital. Up to August 2 his health had been excellent and he has maintained his weight of 169 pounds. Unfortunately, on the date named above, after several days of feeling ill, he was placed in bed with a diagnosis of typhoid fever, which has been confirmed, for we now have a small epidemic of this disease among our patients.

If this patient recovers, and this seems probable, it will be interesting to see whether or not it will relight his recently cured pulmonary tuberculosis.

Two officers, who are not included in the sixty-seven cases mentioned above but were among the first to avail themselves of this method of treatment, have returned to duty.

The first, discharged as cured on April 2, has since passed his examination for promotion to a lieutenancy and served as executive officer of a large receiving ship, which duty requires constant mental and physical execution. He is now at sea. His health is and has been excellent since his discharge from this hospital.

The second, who has had tuberculosis since 1898, left the hospital at his own request on June 13 with evidence of disease still remaining in both apices and a few tubercle bacilli present in his sputum. Since that time he has been on duty in Brooklyn, N. Y. I recently received a letter from him dated August 3, in which he states that he is enjoying excellent health and has held his weight of 180 pounds, in spite of the extreme hot weather and bad climatic conditions. He is keeping up the injections of mercury.

Of the remaining 13.5 per cent. of the sixty-seven patients considered, two have held their own, six have failed and one has died. The autopsy in this last case showed total involvement of both lungs, both of which were riddled with communicating cavities and the entire small intestine encircled with tuberculous ulceration, and the liver and spleen were both the seat of tuberculous disease.

Among the patients considered above we have had fifteen with secondary tuberculous laryngitis, ten of which were ulcerative and five infiltrative, all of which have been cured. These cases also embraced eight cases with cavity formation, in five of which improvement took place, while in two the cavities have been absolutely obliterated. Of the remaining three, two have failed and one died.

As is natural, of the sixty-seven patients treated with mercury eighteen are men at present confined in bed in the infirmary, where in most instances their serious condition required them to be placed on admission. These patients would ordinarily be regarded as hopeless, yet 50 per cent. of them are improving, and there is much more pronounced movement from the infirmary to the ambulant wards than the reverse.

The above results have been obtained under the most adverse circumstances, for the hospital is under process of construction and is being built up around the patients. We lack many of the conveniences and some of the necessities of a completed hospital and have been short of medical officers and nurses at all times. The officers who are patients have been quartered in old dwelling-houses built in the sixties, repaired to meet the emergency, but with slight provisions for out-door life, while the infirmary is the old post hospital built about the same time and but poorly adapted to its present use. Plans have already been prepared for new buildings for these purposes, and we hope that we shall soon have buildings of modern construction and design.

By contrasting the above results with those obtained by the patients who have refused the mercury treatment, but who have enjoyed every other advantage this hospital affords, viz.: rest, life in the open air, splendid climate, good and suitable food—in fact, all that the present condition of this hospital affords—the argument in favor of the administration of mercury is most clearly established.

Of all the patients who have passed through this hospital and have not taken mercury but 33 per cent. have improved, and in most of these the improvement has been more from the standpoint of general condition, as in but few cases has the pulmonary lesion been decreased in extent.

ACTION OF MERCURY.

We believe that mercury acts in two ways: first, as a tonic, increasing the vitality of the cellular elements of the various organs and tissues, and, second, in rendering the blood bactericidal, producing an antitoxin therein, which has a direct destructive action on the tubercle bacillus. This action of mercury is cumulative and lasting, and the immunity conferred by the early doses, plus the resistance to the disease developed by the increased cellular vitality, places the patient in such condition that as treatment is continued smaller doses of mercury are required to obtain the desired results.

If we continue to give the improving patient the same dose of mercury on which he was first placed and began to improve we shall sooner or later notice, first, a rise in temperature, and, second, a loss of weight. Should these signs be passed unnoticed, it is probable that more or less serious damage would result: possibly an active general cellular degeneration, including the cellular elements of the blood, would occur, resulting in more or less permanent damage to the patient, if not a rapid decline and death.

METHOD OF TREATMENT.

It is only by close observation of each individual patient that the original and succeeding dosage can be determined. The drug should never be pushed to the point of salivation.

Our experience with this method of treatment has shown us that the maximum dosage for the original series of injections can not be carried much beyond thirty injections without producing the conditions mentioned above, and that after a period of rest, on resuming the injections the dose carried through the second series of injections must be reduced.

Our routine, therefore, has been developed by experience as follows: One injection of hydrargyrum succinimidum gm. 0.013 (gr. 1/5) is given every other day until thirty injections have been given. Then injections are discontinued and potassium iodid gm. 0.2 (gr. iii) to gm. 0.648 (gr. x) is given, well diluted with water, one-half hour after meals for two weeks. Then potassium iodid is discontinued and no medication is given for one week. Injections are then resumed as follows: One injection every other day until thirty injections have been given, on alternating injection days giving hydrargyrum succinimidum gm. 0.013 (gr. 1/5) and gm. 0.006 (gr. 1/10) respectively. After the thirtieth injection the same course of potassium iodid is given as followed the first series of injections; then a week free from medication. The injections are then resumed again the succinimid gm. 0.006 (gr. 1/10) being given every other day until thirty injections have been given. By the end of this third series experience will direct any necessary further treatment. The above recommendation for dosage is not to be considered absolute, but only a guide. Close observation of each individual patient must fix the dose of the first series of injections.

At times the initial injection will produce a slight febrile reaction, after which the temperature should fall to what it was prior to the injection. Experience has taught us that if this drop does not occur, or if the rise in temperature occurs after the second injection, the dose administered was too large and should be reduced at once.

In conclusion, I desire to thank the staff of the hospital for their aid and support; the commanding officer, Medical Inspector C. T. Hibbett, U. S. N., for his encouragement, and Surgeon W. H. Bucher, U. S. N., whose long experience in the administration of mercury by deep muscular injections in the treatment of syphilis has made his advice and suggestions most valuable.

Special Articles

A NATIONAL DEPARTMENT OF PUBLIC HEALTH.

A MESSAGE TO THE PEOPLE ON ITS CHARACTER, STATUS AND ECONOMIC VALUE.*

CHARLES A. L. REED, M.D.

CINCINNATI.

The active interest long taken by the New York Academy of Medicine in the effort to get a stronger, more comprehensive and more definitely organized national public health administration at Washington makes it singularly appropriate that the present status of the movement and the character of probable proposals looking to that end shall be discussed in this presence. And in taking up that subject at this time I may say that I am conscious of several sources of satisfaction.

In the first place, the agitation long conducted by the distinguished body that I have the honor to address, by the American Medical Association and by other bodies of the organized medical profession, is at least bearing tangible fruit in influential cooperation on the part of the laity.

About two years ago a national public health defense league was organized in this city. A little later a movement originating in the American Association for the Advancement of Science resulted in the organization of an influential body known as the Committee of One Hundred. These two movements have since joined forces and, together with the American Medical Association, are keeping the question before the public and before Congress.

POLITICAL ACTION.

One of the practical results of their efforts was the adoption of a plank in the Ohio Republican platform of this year declaring in favor of "the organization of all existing national public health agencies into a single national public health department." The same declaration, in effect, was made later in the platform of both parties in various states, notably, I believe, in Connecticut. This was followed by declarations of similar purport in the national platforms of both the Republican

* A public address delivered under the auspices of the New York Academy of Medicine, New York, Oct. 29, 1908.

and Democratic parties. I am gratified to be able to assure you that the President has been giving careful attention to this general question and that he has now authorized the statement to be made that he will formulate definite proposals and transmit them with his endorsement to Congress at its next session.

A CAMPAIGN FOR THE GENERAL WELFARE.

It now devolves, not only on the people themselves, but on the nearly 140,000 physicians of this country, as the natural custodians of the public health, collectively and severally, to bring the most active influence to bear, not only in seconding this salutary move on the part of the President when once he shall take the step, but to anticipate that action by a prompt, active and persistent campaign in behalf of this fundamental measure for the public welfare.

The lines on which this campaign ought to be conducted vary in different localities, but there are certain general features that ought not to be ignored in any locality. These features are suggested, in part at least, by the failure to pass the various measures that have heretofore been submitted to Congress. Here let me digress far enough to say that these failures are to be construed only as valuable and, for that matter, successful educational efforts in the general evolution of the desired legislation. Nearly every law that to-day stands the test of the courts is able to do so because it has had to stand the test of more or less prolonged opposition in Congress.

Mr. Sherman framed not less than six antitrust measures, all of which were successively defeated, before he finally fashioned the great law that to-day bears his name and that for eighteen years has stood the test of every judicial tribunal in the land. But, able statesman that he was, he both learned from and taught by each successive effort and so, I trust, have we learned from and taught by the experience that has befallen us in this great effort to furnish something like adequate protection to the greatest natural resource of this country—the health, lives and productive energy of the people themselves.

SOME CAUSES OF FAILURE.

And now, prompted by this spirit, we can, I think, discover several of the causes of failure actually to pass the measures heretofore submitted to Congress. In the first place, our attempts at actual legislation were premature in the sense that they preceded the actual education of the people and the consequent development of public sentiment on the subject. In the next place, it is now apparent that previous proposals have been too radical and have too generally been framed in contravention of the fact that most legislation must be built on previous legislation and is, therefore, essentially evolutional in character. And in the third place it is now very evident that the failure of the medical profession sooner to procure this legislation in behalf of the people is attributable in no small measure to the dearth of representatives of that profession in the legislative halls of the people. We may, with advantage, examine these several reasons somewhat in detail.

A POPULAR PROPAGANDA.

The dissemination by the medical profession of knowledge with respect to public health problems has not been as widespread or as effective as either our opportunities or the character of the subject would warrant. Much, indeed, has been done, and the present information of the people is almost entirely the result of the altruistic initiative of the physicians of this country. But too much of the work has been done in, and confined to, the medical societies and too much of the publicity has been done through and confined to the medical press.

This has too generally amounted to a mere carrying of coals from Newcastle to Newcastle and back again to Newcastle. What is demanded by the times is that proceedings such as these here this evening, and such as an international tuberculosis congress and such as the county medical society, whenever relating to general welfare subjects, shall be heralded through the popular prints until they carry their lesson to every home and fireside in the land. Carry the message to the people! This should be the motto of the campaign.

THE MESSAGE TO THE PEOPLE.

But what shall be the message? In the first place let us tell the people some things that have been done, that they may judge for themselves and, judging, hope for and help secure other things that can be done. In doing so it is not necessary to go so far back as Jenner and the discovery of vaccination and to tell them of the beneficent results of that first great achievement in preventive medicine. Nor is it essential that we should recount the great revelations of Pasteur that gave him that immortality which consists in a perpetual abiding-place in the grateful memory of man. Nor need we speak of Lister. These are oft-told tales that have come to tax the interest of the hearer. But we can tell them of some things of to-day. We can tell them of Finlay, and Reed, and Lazear, and Carroll, and how, from their martyrdom, it comes that the argosies of commerce can to-day sail the seas without flying the yellow flag of pestilence. Tell them this; tell them the humanity of it all.

But if that does not appeal to them, translate it into terms of dollars and cents and show them how "profitable" has been the "investment." Compute the commercial disaster contingent on a single visitation of yellow fever to our southern seaboard. And then tell them how the recent attempted invasion of this country by that dreadful disease was repelled and defeated through the efficiency of the service under Wyman. But, above all, tell them how the zone of pestilence at the Isthmus of Panama has been made the habitation of health that the waters of the two great oceans may be joined, all made possible by the great genius of Gorgas. Tell them that, right now, health and life are being made secure on our mainland and commerce itself, domestic and foreign, is being protected by a valiant guard stationed at our seaports—stationed, for instance, right here at New York—sifting out and thrusting back the disease that comes in the guise of the immigrant, and at San Francisco, where the triumphant battle against the bubonic plague has added new laurels to our country, and especially to our Public Health and Marine-Hospital Service. Tell them of our food and drug laws, and of our supervision of cattle intended for food supply. Tell them of the sanitary work that is being done right at their doors, work that makes their homes habitable. Then tell them that if these things are being done other things that ought to be done can be done.

THE GREAT WHITE PLAGUE.

What, then, are some of the things that are not done, but that ought to be and could be done with a properly constituted national health administration? The broad answer to this question is that preventable diseases could be still further prevented to the almost incalculable benefit of the people. And this, too, must be a part of the message to the people. Let us point to tuberculosis, in the campaign to combat which the scientists of the world have but recently been in congress at the capital of our country. This is a preventable disease, yet, as I pointed out at that congress, this disease, according to the statement of experts, kills 160,000 people and keeps in invalidism nearly 700,000 more people in this country every year.

This is a veritable warfare in which the American people, arrayed on one side, are to-day offering not so much as a passive resistance to an army of invasion—the army of the bacilli—already encamped in our midst, in our very homes, a host more numerous than all the men in all the armies and all the navies of all the countries of all the world in all the ages. And each individual in that host is capable, under favoring conditions, of destroying a human life. As a matter of fact, the human lives thus sacrificed each year in this country are equivalent to the enlisted men of both our army and navy. What if these two arms of our service were wiped out of existence in a single year by a foreign foe? Do you not suppose that every resource of our country would be taxed to repel the invader, to destroy the decimating minions of death? Or suppose that first Indianapolis, then Kansas City, then St. Paul were as suddenly wiped off the map. Would not the people's representatives in Congress vote, if necessary, the last dollar in the treasury to avert such a menace from still other cities?

POISONED WATER SUPPLY.

Now let us consider a condition to which I have been calling public attention for several years. I mean the prevalence of typhoid fever, due to the almost total lack of sanitary supervision over streams that are used in large part and that, in the immediate future, must be used in still larger part as sources of water supply. Many of these streams lie within the states and consequently come within the jurisdiction of the states. But others are distinctly interstate streams and as such fall within the jurisdiction of the United States government. As the protection of interstate streams from contamination will make it necessary similarly to control their tributaries, it may be necessary to expand the functions of the national government in this regard, from the control of interstate streams to the control of interstate watersheds.

This will be especially true in all instances in which the states fail to do their duty by protecting the streams within their borders from death-dealing contamination. But both intrastate streams and interstate streams are, with few exceptions, being rapidly converted into open sewers that disseminate disease. The exceptions are found chiefly in Massachusetts, New York and Pennsylvania. No other states of which I have knowledge have adequate laws on the subject, or, if they have such laws, they do not enforce them. In this regard they are no worse than the United States government, the Congress of which, in spite of executive recommendation, and in spite of the fact that it had a bill on this subject pending before it during the last session, failed absolutely to take any action for the correction of one of the most flagrant evils now afflicting the people.

THE HORRORS OF TYPHOID.

How flagrant is this evil? The first result of stream contamination is the dissemination of typhoid fever. "A thousand miles of river and a thousand miles of typhoid" is the characterization that I have applied with justice to conditions in the Ohio watershed. Most victims of typhoid fever get the disease by drinking the excrement of some other typhoid patient. Then they, in turn, in the absence of sanitary regulations, feed their own excrement to a lot of people further down stream. These facts are very generally known, yet there is popular apathy on the subject. The thought is disgusting, but, disgusting as it is, it does not seem to have impressed itself on Congress.

Nor does the fact that about 28,000 Americans die from this disease in a single year seem to have signified anything to the very Congress under whose authorization the statistics were gathered and promulgated. Yet if every man, woman and child in either Bloomington, Ill., or Lexington, Ky., or Fort Worth, Texas, had died of that disease in a single twelve months, the world would have stood for a moment in consternation—and then something would have been done. But the death roll is not the full measure of the calamity. Nearly 200,000 people were ill of typhoid, but recovered after an average invalidism of sixty days. This is equivalent to saying that every man, woman and child in Louisville, Ky., or Minneapolis, Minn., or Providence, R. I., was ill for two months.

SOME UNSOLVED PROBLEMS.

Now I have talked so far about some demonstrated certainties. We know, in these particulars, just what can be done and just how to do it. But there are in addition many unsolved problems of almost equal importance to the people. Over 60,000 people die annually from cancer, the actual cause of which science has so far failed to reveal. And the death rate from cancer is advancing by leaps and bounds. The prevention of pneumonia, from which 125,000 of our people die each year, is an unsolved problem. The cause and nature of rheumatism needs further elucidation. Science has not yet set a barrier against the prevalence of influenza, from which alone a million or so of people are made ill and are consequently deprived of their productive energy for more or less time each year, and from which cause alone something like 15,000 people die annually. Yet these are all obviously infections and, therefore, preventable diseases. The campaign against the carrier insects—against the flies and mosquitoes, for instance—both of which are responsible for the dissemination of disease—is already a demonstrated success on the Isthmus of Panama and simply awaits legal authorization and executive machinery to make it a success in the states.

There are dozens of other unsolved problems of equal scientific and economic importance. I have ceased talking about the humanity of it all. That argument does not reach the average man. I am simply insisting that, in the presence of all this demonstrated waste—actual and needless waste in dollars and cents—it is the obvious duty of the government to establish a department of public health with power and resources that will enable it to grapple with the great problems—the greatest of all really economic problems—to a few only of which I have alluded to-night.

SOME ASTONISHING FIGURES.

Now what does all this mean? I do not speak of the pain, the sorrow, the humanity or, rather, the inhumanity of it all. There are those who have feelings, are capable of sorrow and who realize the awful significance of the fact that preventable, emphatically preventable diseases, in the aggregate, kill an average of one person every two minutes. But I now appeal to the larger number who, I grieve to say, think only in terms of dollars and cents. So let us translate consumption and typhoid, malaria and pneumonia, cancer and plague into their equivalents, into the coin of the realm. But let us begin with a few primary postulates.

In the first place the most valuable natural resource of this country, fields, forests and mines, not excepted, is the productive energy of the people. In computing the worth of this resource a human life, rather than an acre, a lode or a tree, must be the basis of reckoning. What is it worth? Let us see.

A man's life is his capital. What he earns is the interest on his capital. Then suppose that a man works 300 days in a year at $1.25 a day, and that this money thus earned, $375 a year, represents 5 per cent. on his capital, which, on that basis, would amount to $7,500. Then multiply this by 160,000 for tuberculosis, and 30,000 for typhoid, and so on through the list, which foots up at about a quarter of a million, then add it all together—and you will only have begun. You are to add to this the loss of productive energy of something like 700,000 people constantly ill for a whole year from tuberculosis and nearly half that number ill for sixty days from typhoid, and so on through the list, at $1.25 a day for each one. Then, ignoring the fact that the lives of many are worth thousands and hundreds of thousands of dollars a year, exclude the non-producers —women, children and dependents—by dividing the result by two. Then, still to be on the safe side, divide the result again by two, and the remaining figure, if translated into the coin of the realm and placed in our national treasury, would not only pay for a properly equipped national department of public health, but would, in addition, pay the current expenses of the army and navy, duplicate our armament on the seas, fortify our coasts, deepen our internal waterways, and, in ten years, would pay for the Panama Canal and wipe out our national debt.

Put this in the message to the people.

EXISTING PUBLIC HEALTH AGENCIES.

Of course, such a consummation in all its completeness is entirely beyond hope of realization. The figures are presented only to reduce to approximate concrete terms the enormity of present conditions—conditions which we know could be largely bettered through proper governmental agencies. Let it not be assumed that we are to-day entirely without such agencies—agencies that have been and are to-day doing excellent work.

But they are inadequate and, considered as a whole, scattered and unorganized and to that degree and in consequence of that fact are inefficient. The Public Health and Marine-Hospital Service is under the Treasury Department and, absurd as it may seem, the Secretary of the Treasury is the chief health officer of the United States. The Bureau of Vital Statistics is under the Department of Commerce and Labor. The Bureau of Chemistry, charged with the enforcement of the National Food and Drugs Act, and the Bureau of Animal Industry, charged with protecting the people against diseased meats, are under the Department of Agriculture. The national eleemosynary institutions, all of them public health agencies, are in the so-called Department of the Interior. Of course, the health of the army and navy is looked after by services organized within those respective departments.

There is to-day no service whatever specially organized to fight the plague of tuberculosis. No governmental agency is entrusted with the sanitation of interstate streams and the consequent protection of the people from typhoid due to these media of communication. There are no national laboratories for the solution of the yet hidden mysteries of contagion and infection. Other specific activities, such, for instance, as a campaign against disease-carrying insects, are not provided for, while the scattered agencies that we do possess are given such an unfortunate status in our scheme of government as to compromise their educational value and practically to deprive them of moral force.

Put these facts, all of them, in the message to the people.

MORE MEDICAL MEN FOR CONGRESS.

These facts, together with an intelligent and sympathetic appreciation of the nature of a great national public health service, the importance of establishing it, and, after establishing it, of fostering and maintaining it on a basis of highest practical efficiency, comprise a part, but only a part, of the many reasons why the medical profession should be more largely represented in the halls of Congress. When it is recalled that in the Sixtieth Congress there are but four physicians in the house of representatives and one in the senate, and when it is remembered, by way of comparison, that there are forty physicians in the Senate and fifty-six in the Chamber of Deputies in France, it becomes apparent that, of the two republics, our country is not deriving the benefit it should derive from the medical profession in the way of legislation. This becomes all the more apparent when the fact is taken into consideration that the present Congress, like the preceding congresses, is largely made up in both branches of members of the legal profession.

I mention this fact in no sense of reproach to that learned and honorable profession whose genius has largely fashioned our institutions and given shape and form to our laws—a profession that ought always to be and doubtless always will be largely represented in our legislative bodies. But we have now fallen on times when social and economic questions are clamoring for solution, when ethical problems are to be solved. For the accomplishment of these tasks it is of highest importance that our legislative bodies should be strengthened by a membership embracing more farmers and laborers, more physicians and ministers and educators, more business men, all unhampered with alliances, all fresh from the ranks of the people, all at liberty to serve the people. Then it will be that Congress will do the things that we pray for here to-night.

Put this in the message to the people.

THE POWER OF THE GOVERNMENT—A COUNCIL OF STATES.

The right of the national government, under the "welfare" and "interstate commerce" clauses of the constitution, to do many of these things is unquestioned. Yet there are many things that might better be done by the states. But the laws in the different states are gen-

erally inadequate and, whether inadequate or not, their complete lack of uniformity renders it impossible for the states to cooperate in the solution of a problem which, like the one under discussion, is coextensive with all the states.

Like laws for like conditions is the first requisite for the control for any national necessity by state legislation. And like laws by the states will probably not be enacted to any great extent until, under the initiative of the national government, the states shall send delegates to a representative body, a sort of council of states, which shall meet as a legislature or as Congress meets, in a session or sessions long enough to accomplish satisfactory results, and whose object shall be to formulate standard bills on various subjects and send them back to the legislatures for enactment. In this way, and in this way alone, can the states move with anything like satisfactory rapidity in meeting the crying demand for like laws for like conditions not only in regard to great sanitary problems such as I have been discussing, but in regard to many other problems that concern the economic and social welfare of all the people. This step should be taken without delay, for, even at the best, considerable time must elapse before results from this means can be realized.

But, aside from the special proposition that we are here discussing, some such step as I have outlined is imperatively demanded to conserve the states in their present integrity.

Put that in the message to the people.

THE PRESENT DUTY OF THE NATIONAL GOVERNMENT.

But what shall be done by the national government? I am not authorized to speak for the proposals which the President now has in contemplation. I do not feel that I am anticipating them in the least when I say that there ought to be but little absolutely new legislation undertaken as an initial step. The first thing that ought to be done is to assemble all existing public health agencies and coordinate them under a single head, leaving each agency to continue its activities under existing laws, supplementary laws to be enacted as they are afterward indicated. These agencies could be grouped into a single department and the title of the department so changed as to give titular recognition to the service without multiplying cabinet officers, to which latter action there seem to be sound executive objections.

Thus, if it should be found to be wise to make the Bureau of Vital Statistics the nucleus for the aggregated service, the name of the department in which it is located could be changed to that of "Department of Commerce, Labor and Public Health." Or, if it shall be deemed expedient to select the Department of the Interior, the name of the department should be changed to that of "Department of Education and Public Health," which, unlike the present title, would mean and stand for something distinctive among our great national interests.

Be that as it may, I insist, in the name of the medical profession, in the name of science, in the name of humanity, that a great governmental agency to conserve, as this one proposes to conserve, more lives, more homes, more property, and more money, than any other single agency in the whole plan of government, shall be accorded a status fully befitting its dignity and its worth.

And let this be the message to the people.

THE EPILEPTIC INSTITUTE COMPANY.

ANOTHER[1] FRAUDULENT CONCERN AND ITS SUPPRESSION BY THE POSTOFFICE DEPARTMENT.

Among the pseudo-medical institutions that have been investigated and closed through fraud orders by the Postoffice Department was a Cincinnati concern known as the Epileptic Institute. The following is an abstract of the report on this concern by R. P. Goodwin, Assistant Attorney General to the Postmaster General. It is based on an investigation conducted by Inspector George W. Sorenson and others:

This business consists of a medical treatment by mail of the disease of epilepsy. One Otto Kalmus, a resident of Cincinnati, commenced the business in the spring of 1903, under the name of the Epileptic Institute, and so it continued until July, 1907, when he incorporated it under the name of the Epileptic Institute Company, he continuing as president and general manager and principal owner. As a private address for patients who, it was explained, might not care to have it known that they were corresponding with an epileptic institute, use has been made of the name of Dr. H. J. Luecke, a physician connected until recently with the institute. While not with the institute since last November, Mr. Pyle and Dr. Schoenling explained at the hearing that by agreement with Dr. Luecke his name has continued to be used, and that the institute still receives that mail addressed to him which is also directed to Box 99 in the Cincinnati postoffice.

Until lately, communication with epileptics was obtained through advertisements in newspapers, chiefly those circulating among Germans and other foreigners. One of these advertisements, taken from the Dec. 13, 1905, issue of the *Home and Farmers' Companion*, a German agricultural paper published at Milwaukee, Wis., was furnished the inspector by Mr. John Edel, father of a former patient of this concern, and when translated reads as follows:

A BOOK IN REGARD TO FITS SENT FREE.

The Epileptic Institute in Cincinnati will send perfectly free of all cost to every reader who writes for it a valuable German Doctor book, containing many pictures, treating of the causes and cure of fits. It sets forth how and in what manner this terrible disease can be cured with safety, lastingly and for one's whole life, through a treatment altogether new. It is worth its weight in gold. It costs nothing and is securely packed, and will be sent gratis and post free. Order at once. Address Epileptic Institute, Box 99, Cincinnati, Ohio.

HOW PATIENTS ARE SNARED.

More recently the practice has obtained of purchasing the names and addresses of epileptics from, as the inspector says, "Other concerns that have obtained all of the money possible from such unfortunates without effecting a cure," and then mailing circulars to such persons, urging them to take treatment from the institute. Names have been so purchased, the inspector reports Mr. Kalmus and Dr. Schoeling informed him, from one Dr. Town of Fond du Lac, Wis., and from the firm The Guild Company of New York, N. Y. Mr. Kalmus identified for the inspector the circulars so sent by him to such persons soliciting the addressees to become patients of his institute. Samples of these circulars are among the papers. They are filled with extravagant and highly colored representations with reference to the unprecedented success of the institute's treatment, which it denominates the "Schönka" treatment, as a cure for epilepsy; and among other things it is represented that this treatment is original with the institute, and by its means the institute can successfully treat the heretofore-considered incurable disease, epilepsy, and in many cases effect a cure; that the treatment is something not known to medical science and is different from anything used by the profession in such cases; that the physicians of the institute are skilled and experienced specialists, and include "one of the foremost examining

1. Previous articles in this series were: "The Reinhardt Case Concluded: The End of a Long Fight for the Protection of the Public Against Imposition," October 3, page 1144; and "Medical Institutes: How They Entrap the Unwary Young—the Hibbard Case as an Illustration," October17, page 1330.

specialists in America," and that the case of each patient will be carefully considered, and in instances where a cure is not believed to be probable the patient will be so informed frankly, and also that the treatment is perfectly harmless.

The first circular sent to prospective patients is accompanied by a booklet entitled "Causes and Cure of Epilepsy, by Otto Kalmus, Epileptic Institute, Cincinnati, Ohio, U. S. A., Copyright 1905 by Otto Kalmus, All Rights Reserved," and also by a symptom blank on which the prospective patient is requested to outline his condition and return it to the institute. This symptom blank, when so returned, is the basis of the institute's diagnosis of the case. Quoting from this circular booklet and symptom blank, such statements as the following are held forth as inducements for those afflicted with epilepsy to commence treatment with this institute:

It gives us pleasure to acquaint you with the efficacy of our treatment for Epilepsy and its related afflictions. We are specialists confining our practice to the treatment of these derangements; ordinary physicians cannot cure these diseases and frankly admit it when honest with their patients.

Years of untiring research and investigation of a great number of epileptic cases have at last resulted in an eminently successful method, originated by us and known as the SCHONKA TREATMENT.

This treatment is not a general thing; it cannot be administered to all patients alike; the best results are obtained only when it is graduated to meet the special requirements of each case and directed at the predisposing cause.

No matter how hopeless the case may seem, no matter how many doctors and remedies have been tried in vain, do not hesitate to consult us. If we regard the case beyond our power we shall not hesitate to tell you so. Awaiting return of the symptoms blank filled out and assuring you prompt and careful attention, we remain,

x x x

Specialists in the treatment of Epilepsy, Neurasthenia and disorders of the nervous system.

Our treatment will be directed at the cause of the derangement. It is a mild and safe, yet radically effective method of treatment, and by adapting it to the individuality of the case we can offer the strongest possible encouragement.

The Schönka Treatment.

This treatment, known as the Schönka Treatment, is not the discovery of a day. It is founded upon the study, discovery and scientific research that have come down through centuries of medical investigation and learning.

While this treatment will perform its part in assisting nature to effect a cure better than any other treatment, it must be admitted that not every case is curable. It is safe to state, however, that no other method has been more successful in the treatment of this terrible disease than the Schönka Treatment.

No epileptic, no matter how severe his trouble, should hesitate in taking the Schönka Treatment, for if his case is curable this treatment is the one he can depend on.

It is safe to say that no other method of treatment of Epilepsy has a greater number of cures to its record. There is no reason why anyone should continue to suffer from epilepsy or permit a dear friend or relative to suffer from this most annoying disease, when the means of relief are so near at hand.

Considerable of the booklet is also given up to distressing accounts of epileptic seizures in public; the obvious object being thereby to frighten the epileptic into exaggerating the consequences of his own affliction and purchasing the treatment.

The questions asked by the symptom blank are quoted below in full, to show the meagerness of the information asked for and the basis for the evidence, hereafter referred to, that it is insufficient to enable a doctor to make an accurate and scientific diagnosis of the condition of the patient:

Name of patient.
Give full address.
Express office.
Age. Weight. Complexion.
Married. Any children?
Occupation.
How long have you had epilepsy?
Original cause?
Have you any other disease?
Ever masturbated?
Any of your relatives afflicted with Epilepsy?
Have parents been subject to alcoholism?
How often do attacks occur?
Day or night?
How long do they last?
Do you lose consciousness completely?
Do you lose control of the bladder or bowels?
What symptoms do you notice before attacks?
And afterwards?
Is your memory impaired?
Do you have headache?
Any heart trouble?
How is your appetite?
Is your digestion good?
Bowels regular or constipated?
How many pints of urine do you pass in 24 hours?
Is it light or dark in color?
Do you suffer from incontinence of urine?
Sleep well? Are you nervous? Anemic?
Any difficulty in breathing?
Have you ever had an operation?
Do you use tobacco or strong drink?

For Females Only.

At what age did you menstruation appear?
Is it regular scanty profuse painful?
Have your monthly changes any influence on the attacks?
Any ovarian trouble? Displacement of the uterus? Or other female complaint?

Should the person to whom this first letter should be sent fail to return the symptom blank, the practice is to send him or her a second circular, further urging the epileptic to return the symptom blank, and impressing on him or her the unparalleled success that the institute is having in treating this disease.

Should the epileptic still fail to reply, it is the practice of the institute to send him a third circular of much the same nature as the second. In this circular occurs this statement:

You secure without cost the opinion on your case of one of the foremost examining specialists in America.

Should the epileptic still fail to reply, a further circular is sent him of much the same nature as the preceding, in which is the following statement:

It is a common enough thing to hear of those who are called incurable among sufferers from epilepsy; in fact if we believe what the ordinary doctor says, most epileptics, if not all, are hopeless and beyond human help. This is an error. Medical science has long been powerless, but we have progressed and modern science has found a way by which some cases of epilepsy can really be cured.

HOW PATIENTS ARE TREATED.

If in consequence of any of these circulars the epileptic should return the symptom blank, it is the practice to mail him a circular, reading as follows:

My Dear ———

Your letter with description of your ——— case arrived with this morning's mail.

This case appears to be serious and somewhat complicated and demands most careful attention. Before giving you a definite opinion I desire more time in order to give the case the very best personal attention possible. I shall make an accurate diagnosis and notify you whether a cure can be effected.

I greatly regret this delay but if you desire an exhaustive examination, it is absolutely necessary. You will realize that it is for your own interest and I believe I owe my success to the careful attention I give to each patient.

Remember that I am considering the case and that you will hear from me in about two days, as soon as I have thoroughly investigated every symptom of the complaint.

Faithfully yours,
THE EPILEPTIC INSTITUTE CO.,
Per Medical Director.

P. S.—If you have not received our booklet explaining CAUSES and CURE of EPILEPSY, please notify me so that I may send you a second copy free.

Two days after the above circular is mailed, the practice, as Mr. Kalmus explained to the inspector, is to mail the epileptic the following circular as a diagnosis:

My Dear ———

Since writing you a few days ago I have given your case earnest, careful and conscientious study.

I find that your spells and seizures are of Reflex Origin; you are suffering from what is called in medical language "———— Epilepsy," which is a deviation from the more common form of the disease and with which it is so easily confounded. Although there has been no perceptible change in your condition for some time, the chances are that unless prompt and energetic treatment is begun, the trouble will become further complicated and may result in the gradual loss of the more important functions of your brain and spinal cord.

Whatever your experience has been in the past, I believe I am justified in saying that medicines have done more harm than good, for the reason that they were intended to smother and suppress rather than help *cure* the disease.

It is a well-known fact that many brother physicians find it difficult to relieve Epilepsy when confronted with a stubborn case, and it is a constant source of astonishment to them, that I am treating some of the severest cases with great success. You see there are no less than forty-eight different types of Epilepsy; in each of these forms the attacks originate differently, consequently every type requires a modified system of treatment, which again must be varied according to the existing complications, and you will easily understand why a regular physician who in his entire professional career encounters at most not more than a dozen cases, can not possibly be qualified to treat such cases like a specialist, who comes in contact with almost every type daily.

I have studied your symptoms carefully, studying out each separately and collectively, with regard to the progress of your disease and relation to your future health and I have also compared them with those of a number of similar cases of Epilepsy to see what results have been accomplished, so that I am able to tell you whether or not I can conscientiously offer you any encouragement.

After this thorough investigation and diagnosis, I can now honestly say that your case should readily yield to my treatment, if commenced at an early date and my advice closely followed. In a case so deep seated and complicated, ordinary treatment would be of no avail; it would be useless to merely try to suppress and diminish your attacks; the special features must be considered and treatment skillfully directed at the *cause of the disease* if it can be reached.

It is therefore my intention to treat not your symptoms alone, but I shall endeavor to eradicate every trace, manifestation and effect of the disease entirely from your system, thus preventing a return of the attacks. My long experience in cases of this character has proven this the only successful way.

Because of the complicated nature of your trouble, some special remedies have been required in order to bring about quick relief, and the treatment which I have formulated for you is composed of different remedies, each having its own object to accomplish in restoring you to health. The medicines I prescribe for my patients are in my opinion, positively the best that medical science has garnered from the wisdom of ages and are perfectly harmless; they are mild, soothing and healing, contain nothing injurious and leave no unpleasant after effects. They are made with the greatest care and with strictest attention to such details as accuracy, purity and reliability. I do not use opium, Hemlock or other dangerous drugs that merely smother the symptoms and for a time ward off the attacks. That is one way of treating epilepsy, but it is not my way.

In view of the fact that in your case there exists a marked tendency for the worst and inasmuch as I presume you desire relief, I have personally prepared this treatment for you, which is absolutely accurate, and perfectly adapted in every particular to the requirements of your case.

I do not desire to appear as unduly urgent in the matter, nor do I approve of sending medicine C. O. D., yet knowing what your trouble can lead to if neglected, I thought it best to put this treatment within your reach at once, and I have lost no time and shipped this complete course of treatment to your express office, where the agent will deliver it to you on receipt of $.... and express charges.

This may at first seem high to you, but when you stop to consider that the treatment consists of the very purest and highest grade of ingredients that can be procured in any part of the world, also the time and painstaking care which I have given to their exact preparation for your especial case, then I feel confident that you will come to the conclusion that it is just as cheap as I could make it consistently with my high reputation, which I could not afford to jeopardize with a cheap grade of remedies that would not produce the desired results. I trust you will appreciate this conscientious work and the deep personal interest which moves me to do the very best that lies within my power for you and that I have in preparing this treatment taken the same care that I would were you my nearest kin.

Everything is securely packed and free from observation. Full, simple and explicit directions, regulations for your diet, mode of living, etc., are enclosed in the package. Read them carefully, pay attention to the treatment and I assure you that in a short time the unmistakable signs of a marked change for the better should become manifest. With proper care and attention, good results are generally accomplished, where the treatment is promptly taken. I shall want you to write me freely, that I may know how you are progressing and counsel you until no longer in need of medical advice.

I have tried to point out to you as clearly as possible, the wise course to take and I can urge you with good conscience to take this important step and begin your treatment as soon as you can, for should you let this opportunity go by, it might be a source of regret as long as you live. Above all things let me appeal to that strongest of human instincts, nature's first law—self-preservation. Do your duty by yourself.

On the other hand, I want your case for treatment, knowing as I do what a splendid thing it would be for you to be rid of that demon epilepsy—how much better, livelier and brighter you would feel and how much more life would be worth living.

I do not accept any case unless I have the necessary time to devote to any one so afflicted, and for this reason there has been a little delay in fully replying to your letters, but in future your letters will be answered on the same day that I receive them.

As soon as the medicines are received, will you kindly date and return the enclosed post-card, that I may make a note of the time the treatment began, on my books.

With best wishes, I remain,

Sincerely your physician,

THE EPILEPTIC INSTITUTE CO., Inc.,
per Medical Director.

(A copy of the Booklet, "GUIDE FOR EPILEPTICS" is enclosed in package).

P. S.—The package is shipped as coming from my Secretary, O. Kalmus. No one through whose hands it may pass will know what it contains, or that it comes from a doctor. I do this to protect you from annoyance as I find that many of my patients wish to avoid publicity.

This diagnosis letter is a stock circular printed in similitude of typewriting, and when sent out as a diagnosis to patients is the same in all instances, with the exception of the name of the prospective patient, the particular variety of epilepsy from which he is diagnosed to be suffering, and the price of the medicine. So far as the inspector could find, the practice has been to send out this stock diagnosis letter in all instances. At the hearing, however, it was claimed, that in some instances, which it was admitted were few, a special letter was prepared, and that sometimes cases were rejected, in which event, of course, the diagnosis letter would not be sent. When the inspector called on the institute to furnish him with the names of rejected cases, Mr. Kalmus produced the names and addresses of five persons. As to the four who resided in the United States, the inspector addressed inquiries to their postmasters. In three cases the postmasters knew nothing about the parties, and in the one case where the postmaster could locate the patient he discovered the case had not been rejected, but had in fact been accepted and medicines been sent to the patient C.O.D. and the price later reduced to induce acceptance of the package. The inspector also had a practicing physician of Cincinnati make up a fictitious case of an incurable case of hereditary epilepsy, which he then mailed to the institute. In return he received in due course the regular stock diagnosis. The institute's failure to furnish any real cases of rejected patients and its acceptance of the inspector's test of an incurable case indicate that the occasion must be quite rare when the stock diagnosis letter quoted above is not used urging the epileptic to apply to the institution for treatment and holding before him strong encouragement for a cure.

At the same time that the above diagnosis is mailed there is sent to the epileptic by express a package of medicine, with the charges to be collected on delivery.

Should the prospective patient decline to immediately accept and pay for the C.O.D. package, the institute mails him or her a regular series of letters to induce the acceptance of the package. In one letter it is said that "these remedies are not cheap compounds, but a scientific treatment skillfully prepared at a great expenditure of time and trouble from rare and costly medicines, and under my personal supervision solely for this case"; that "what you want is a cure, and my experience tells, that a system like my own, aiming at permanency of results is really the one worthy of your attention. These so much-needed medicines are now within your reach and it rests entirely with you to decide. If you wait it may be forever too late; but if you do your part promptly, I do not hesitate to predict a grand success"; that "you know the sad consequences of delay and I honestly believe there is no such thing as fail in this case." In another of this series of letters the epileptic is told that the institute's previous experience in curing just such cases convinces it that its treatment faithfully used will prove for him, as it has for so many others, "a genuine success." Reduction of the price of the C.O.D. charge is also resorted to to induce the acceptance and commencement of the treatment. Likewise, after the treatment has once been commenced the institute has a regular series of letters to mail the patient to induce him to continue with the treatment. One of the statements made in this series of letters is: "I am entirely satisfied that the treatment which I have shipped will prove its worth and merit, and just now is the very best opportunity to take it, for if there is no further complication, a cure should certainly be effected within a reasonable length of time."

The time that this institute urges its patients to continue with the treatment is from a year to a year and a half, and longer, varying, of course, in different cases. Its charge for medicine ranges from about $3 to $9 a month, the variance depending, it seems, on the amount which the patient can be induced to pay.

WHAT THE SCHÖNKA TREATMENT IS.

The medical treatment is so glowingly advertised by this institute as a "cure" for epilepsy is based on the bromids. It is what is generally known as the bromid treatment except—and this is where the institute rests its claims for unusual and peculiar efficacy—that the drug adonis vernalis is used in conjunction with the bromids. In connection with the medical treatment, the usual and ordinary rules regarding diet, hygiene, etc., are also given.

Dr. Kebler informs me that what is in general known as the bromid treatment is in common use by the profession in treating epilepsy; that its physiologic action has been quite well defined; that it is not a "cure" for the disease, but acts simply as a sedative, and in this way tends to suppress the attacks; that medical science to-day has no drug treatment that will cure this disease; that this disease is among the most difficult and intractable of all diseases to treat, and that small per cent. of the more favorable cases only have been successfully treated, and that the success in these instances has been due most probably to the condition of the patient himself rather than to the medication.

[The report then goes on to quote from the text-book or other writings of a number of recognized medical authorities, statements showing the evil results that may follow the long-continued use of the bromids. For instance, H. A.

Hare ("Text-Book of Practical Therapeutics," 8th edi., Phila., 1900, p. 110) says:

> In other cases, evidence of mental aberration develops, the patient becoming irritable, morose, and even homicidal. Sometimes, however, we find melancholia and hallucinations, and, rarely, exalted ideas. In still others a dangerous suffocative bronchitis develops, the patient may become profoundly cachectic, or the condition may resemble typhoid fever.

Testimony to the same effect is quoted from the works of Drs. Roberts, Bartholow, S. O. L. Potter, Sir T. L. Brunton, H. C. Wood, Sr. and Jr., Edward N. Clarke, G. F. Butler, J. B. Yeo and R. W. Wilcox. Dr. W. T. Spratling, an authority on epilepsy and for many years superintendent of the Craig Colony for Epileptics, at Sonyea, N. Y., a state institution of recognized merit, is also quoted at great length. From his remarks the following are selected:

> The colony has ascertained through the analysis of nearly thirty of the more widely advertised patent nostrums for the "sure cure" of epilepsy that the bromid is the base of them all.
>
> Many of these quack remedies so glowingly set forth in the public prints, possess the power of suppressing the attack for a time, but it is suppression only, not cure, and the patients are always worse afterward.
>
> If pushed too far, death may supervene from acute bromid poisoning. This happened in the case of a boy of 12 years, whom I knew, whose parents gave him too frequent doses of a patent nostrum, the essential ingredient of which, as with the bulk of patent epileptic cures, was bromid of potassium.
>
> It is a frequent experience to see patients brutalized by bromid, go months without fits, but with a loss of mental and physical activity.

The report further publishes the replies to a series of questions, made by several of the more prominent practicing physicians in response to a request by Dr. Kebler at the instigation of the assistant attorney general. On all points the replies are practically unanimous, and are to the effect that symptom blanks sent through the mail can alone not afford data for a reliable diagnosis of epilepsy; that the indiscriminate use of bromids is dangerous; that the bromid treatment is not a cure, but only a palliative, for epilepsy; that the respondents have no personal experience of a single case in which a cure of epilepsy could be attributed to the use of the bromids alone; that adonis vernalis can be beneficial at best in selected cases of certain types only; that its use is liable to be attended with danger; and that they know of no instance in which a cure of epilepsy could be attributed to its use.]

ADONIS VERNALIS: HOW IT CAME TO BE USED.

As regards the drug, adonis vernalis, which the institute claims is what gives its treatment the peculiar and unusual merit that is claimed for it, and makes it a "cure" where science has been unable to discover any curative medication for this disease, in addition to the statements of the physicians quoted above, Dr. Kebler advises me that this drug has been known to and used by the medical profession for some years as a heart stimulant, and was for a while experimented with somewhat in connection with bromids for the treatment of epilepsy, but was found to be without value, except possibly in a few cases where there is an affliction of the heart which might be contributory to the case. He states, however, that such cases could only be recognized by careful personal examination. Dr. Schoenling told me that the use of this drug was suggested by Mr. Kalmus when it was proposed to undertake this scheme; that he advised Mr. Kalmus that he did not believe it was of value; but that Mr. Kalmus insisted, and they therefore experimented with it and found it to be of value, and so made it a part of the treatment. He did not tell me what experiments were made or on whom, nor was anything given me on this point except Dr. Schoenling's general statement. Mr. Kalmus is not a physician, nor has he a medical education; and Dr. Schoenling could not advise me how it was that Mr. Kalmus got the idea of using this drug in this connection. I am unable to understand how it was that this drug was made a part of this treatment, except that it was to provide a point for argument in the event, which may have been foreseen, that the unusual claims of the institute for the new and wonderful cure for epilepsy, when in fact the bromids were to be the base of the treatment, should be challenged.

INADEQUACY OF THE SYMPTOM BLANK.

The blank used by the institute to secure the patient's symptoms for diagnosing his condition and preparing his treatment has been set forth above. In addition to the statements of the physicians quoted above, Dr. Kebler advises me that he does not consider it practicable by such a means and such information for a physician to make an accurate and scientific diagnosis; and Dr. Schoenling also was forced to admit that such was not practicable in all cases, although he claimed that such instances would be few. The meagerness of this blank, as a basis for an accurate and scientific diagnosis, is quite marked when it is compared with that used by the Craig Colony above referred to in considering applications for admission to that colony (see "Bulletin" of April 1, 1906). As the institute's treatment is supposed to be predicated on the information so obtained, if it is insufficient for a proper conception of the patient's condition, the good faith with which such cases are undertaken to be "cured" must certainly be questionable.

THE RESULTS OF THE TREATMENT.

With the papers in this case is correspondence had by the inspector with a number of persons who were patients of this institute. The inspector says he procured their names and addresses in 1905, and that after allowing the 12 to 18 months to elapse in which the company claims its treatment will effect a cure, he inquired of them the results of the treatment. Not one of the answers received says that a cure was effected. A number state they obtained while taking the treatment more or less relief in the suppression of the attacks or the reduction of their severity or frequency. In some instances the patient became so bad from the effects of the bromid that the treatment had to be discontinued and the patient confined in a state institution. The suppression of attacks or the reduction of their severity or frequency, which this correspondence indicates is a result of this treatment, is, I am informed by Dr. Kebler, the ordinary effect of bromids. This result, however, does not mean that the patient has been cured of the disease.

HOW TESTIMONIALS ARE OBTAINED AND THEIR VALUE.

As part of the advertising literature of the institute to secure patients, use has been made of what seemed to be reprints of letters written by patients to the institute speaking favorably of the results obtained in the cases of the writers. The inspector wrote to the postmasters of all of the persons whose testimonials were so used. The correspondence, which is among the papers in the case, discloses that practically all the testimonials, some twenty in number, were directly or indirectly solicited, probably while the patient was still taking the treatment and was under the favorable influence of the bromids. In one instance the patient was given free treatment for his testimonial, and in another instance a present of a silver watch was used as an inducement for the giving of the testimonial. The correspondence developed that the persons giving these testimonials had not been permanently cured of epilepsy, though in most instances the attacks were suppressed or their frequency or severity reduced while taking the treatment by the effect of the bromids. The postmasters also indicate in several instances that it is not certain whether the patient was actually afflicted with epilepsy or was suffering merely from hysteria. This institute, it would seem, although knowing that these testimonials were the product merely of the ordinary effect of the bromids, nevertheless circulated them for the purpose of misleading and deceiving the class of persons from whom it solicited business into believing them actual cases of cures effected by some new and wonderful treatment. As heretofore stated, this institute appeals for business principally among foreigners, and the letters of patients that have been submitted on the hearing indicate that as a rule the writers are persons of small education and experience and are of a class that probably could be easily deceived.

WHO AND WHAT THE "SKILLED SPECIALISTS" ARE.

One of the strong reasons urged for taking treatment by this institute on those persons whom it solicits to become its patients, is the representation that its patients have the benefit and advantage of having their cases handled by trained

and skilled specialists, including one of the foremost examining specialists in America. As I am advised, there have been connected with this institute, since it commenced business in the spring of 1903, three physicians, namely, Dr. E. H. Schoenling, Dr. H. J. Leucke and Dr. A. L. Guertin. Dr. Schoenling stated at the hearing that for about the first six months, being half owner for the first three months, he attended to the medical end of the business for Mr. Kalmus, examining the symptom blank and diagnosing the case, prescribing the treatment and compounding it as well; that after he then left, Dr. Leucke did this work until December, 1907; and that since then he has again done the diagnosing and prescribing and Dr. Guertin has done the compounding. Dr. Schoenling graduated in 1900, when about 22 years of age, has made no special study of epilepsy, except in connection with this mail-order business, is not a member of any medical society, is not regarded in the profession as a specialist, and has most of the time since his graduation worked for $25 a week for a Dr. Charles Shafer of Cincinnati, who advertises in the public prints soliciting kidney and urinary and sexual cases. The salary paid him for his work at the institute, he says, has been less than $100 a month; and stated that he spent but a few hours each day at the institute and regarded it as a sort of a side line to his regular work with Dr. Shafer. Dr. Leucke graduated in 1901, went to this institute in 1903, has had no special preparation in epilepsy, does not consider himself a specialist, and was paid by the institute, the inspector says, only $15 a month. He is not a member of any medical society, his professional standing is doubtful, his regular practice is sexual and urinary diseases, and in December last his advertisements were excluded from the Cincinnati papers on the ground that they related to the sale of abortifacients and the performing of criminal operation in violation of the statutes of the United States. Dr. Guertin receives $35 a month for his services from the institute, works there but a few hours each day, is not a member of any medical society, his standing in the profession is questionable, he has little or no practice in Cincinnati, and was investigated by this department in 1905 for giving to a concern against which was pending a charge of fraud under these statutes, and against which a fraud order was later issued, a testimonial as to its medicine, which he later admitted to the department was done for a valuable consideration, and without reading the statement which he was paid to sign, and which he repudiated as untrue. He admits he is not a specialist. These are the self-styled specialists and "foremost examining specialists of America" of this institute. No comment is needed on these facts to show the utter falsity and fraudulency of the representations in question.

A "FRANK" OPINION.

Another representation used to secure patients is that in those instances where a cure is not believed to be probable, the party will be so informed frankly. The evidence heretofore referred to as regards the inability of the institute to sustain its claims as to the rejection of incurable cases, and the test case of the inspector in which the institute solicited with its regular stock diagnosis circular, holding forth strong encouragement for a complete cure, what Dr. Lewis of Cincinnati referred to above, and, Dr. Kebler states, represents an incurable case of hereditary epilepsy, prove, it seems to me, that this promise is not made in good faith or with the intention of observing it.

On the hearing it was ingeniously urged for the institute, in excuse of this course of action, that it could not be told with certainty in advance of treatment what would be the result in any specific case. The natural question, then, is, Why is such a promise made? And the argument also obviously involves an impeachment by the institute itself of the good faith of the assurances of an almost certain "cure" with which it induces patients to undertake the treatment.

HARMLESS MEDICINES.

Another of the representations is that the medicines used are "perfectly harmless" and "contain nothing injurious and leave no unpleasant after-effects." The dangerous nature of the medicines that are used has been previously shown; and it is to be remembered that this danger is increased by the fact that the treatment is administered without the personal examination or supervision of a physician. The jeopardy to the health, and even reason and life themselves, of the patients that is involved in the methods used by this institute renders this business, it seems to me, one of the more pernicious and reprehensible of the schemes to make money by fraud which infests the mails and against which the statutes here in question are directed.

COSTLY MEDICINES.

Another representation is that the medicines used are costly and rare. Dr. Kebler advises me that none of the drugs which the institute states it uses can be said to be costly or rare.

THE BASIS OF TREATMENT.

Another statement is that the treatment is "directed at the predisposing cause," that "it would be useless to merely try to suppress and diminish the attacks; the special features must be considered and treatment skillfully directed at the cause of the disease," etc. In fact, as shown by the treatment actually administered, the very thing is done that it is claimed will not be done, and the thing which it is claimed will be done is not done.

The institute has submitted on this hearing as proof that it uses a treatment that is effective and of benefit to its patients, a considerable number of letters and affidavits of persons who state they took treatment from this institute and were benefited to a greater or less extent by the suppression of the attacks or the reduction of their frequency or severity, and a few even think they have been cured. In some instances it is stated that the patients realize that a cure is uncertain, but that they are satisfied with what results they are experiencing and are willing to continue longer with the treatment. These statements are to be taken in connection with all the other circumstances of the case, especially the facts as to the treatment which is administered, the mode in which it is done, and the qualifications and experience of the physicians handling the cases. When it is known what is the medication that has been given these people, namely, the bromid treatment, the physiologic effect of which is well known to medical science, the significance of these statements is easily appreciated. Nothing is disclosed except the well-known effects of the bromids, namely, that as a sedative they tend to suppress the attacks. One fact to be borne in mind concerning these statements is that they were prepared by the institute and its attorney to meet the charges here presented, and then sent to the patients to subscribe to what was written if they would; also that the statements seem to be principally from patients who commenced more or less recently taking the treatment and were still taking it.

The institute has treated in all, I am informed, about 6,000 persons. The probability is that it has carefully scanned its records and with the 100 or so cases which it has submitted to me to consider has put forward its better foot. The institute has given these people certain drugs with certain known qualities, and it would be strange indeed if some of them did not experience the ordinary effect of such treatment and feel satisfied therewith. But it must be remembered that each of these persons whose statements are presented, as well as the other patients of the institute the results of the treatment in whose cases are not disclosed, were all solicited and urged to pay their money and take this treatment with strong encouragement for a complete and permanent cure, and with the assurance that they would be treated with a new treatment originated by this institute and unknown to the medical profession generally, and which had the power to work cures in cases where the profession was helpless, and with the further assurance that they would not be drugged "merely to smother symptoms and for a time ward off the attacks—that is one way of treating epilepsy, but it is not my way"; also that their cases would not be accepted unless it was felt they would be cured; also, that the physicians of the institute were specialists and included the foremost examining specialists of America; also, that the

treatment was entirely harmless, as well as many other statements to which attention has been called. In fact, the institute had no warrant for its strong encouragement to the prospective patient, to expect a complete and permanent cure, and could not have offered such hopes in good faith; it did not have any new treatment, but simply proposed to use a treatment based on the bromids, which are not a "cure" for the disease; it was intended simply to smother the symptoms, and was not intended to use some other way so fondly distinguished from the "smothering" process; it was not proposed to frankly so advise those persons who it was not believed could be cured, but it was intended to urge the treatment on practically every one without discrimination; and the physicians of the institute were not specialists as pretended, nor did the staff of the institute include the foremost examining specialists of America; but, in truth, the physicians of the institute were young graduates and men without standing in their profession and following questionable lines of practice, and were men employed at what would seem to be about as small salaries as any at which the required service could be obtained; and the treatment intended to be administered was not entirely harmless, but was of a nature that might wreck the health and even reason and life themselves of the patient. Therefore, while in what may be said to be a comparatively few instances, as the institute has not disclosed its records in the great number of its cases, patients have experienced from the treatment what is the ordinary effect of the bromids and may feel satisfied with so much, yet I feel it is not true that the other and the greater share of the patrons of the institute have not been deliberately deluded with false hopes and representations, and defrauded of their money which they probably would not have paid if aware of the facts, in addition to having their health, reason and life endangered. The answer to the claim that certain of the patrons are satisfied with what benefit they do get from the treatment, is that in that event were the business conducted with an honest purpose there should be no occasion for promising anything more. The satisfaction of the few is not justification for the defrauding of the many. Furthermore, this scarcely is the case in which the patients are sufficiently familiar with the facts to be able to determine whether they should be satisfied or not, and this is especially so of the patient who has commenced the treatment but comparatively recently, and particularly among the class of people among whom it appears the most of the business of the institute is solicited.

CRIMINAL PROSECUTION INSTITUTED.

After the fraud order had been issued against this concern, its promotor, Otto Kalmus, at once attempted to evade the effects of the order by starting the same scheme under another name—the Hamilton Dispensary. That his operations under the new title were extensive is evident from the fact that we received letters and "diagnosis blanks" sent out by this rechristened fraud from even as far away as the Philippine Islands.

The postoffice authorities again took up the matter and not only was a fraud order against the Epileptic Institute Company extended to cover the mail addressed to the Hamilton Company, but criminal proceedings were instituted against Kalmus. We learn from S. T. McPherson of Cincinnati, United States District Attorney, that Kalmus was convicted October 22 of using the mails in furtherance of a scheme to defraud. A motion for a new trial was made, which the court has under advisement. Meantime the defendant is out on $1,500 bail.

It is earnestly to be desired that the outcome of the case will be such that Mr. Kalmus, after enjoying a well-deserved rest at the expense of the United States, will go into a more honorable business than that of preying on epileptics.

A Proprietary Booze Miracle.—A brewery advertises an alleged malt liquor as a tonic, and makes the astounding statement, *apropos* of the thin man, whom it urges to take a glass with his meals, that "it will send red blood through his veins." Remarkable!

Clinical Notes

TREATMENT OF TRAUMATIC RUPTURE OF THE URETHRA.*

REXWALD BROWN, M.D.
SANTA BARBARA, CALIF.

Following severe traumatic rupture of the urethra, posterior to the peno-scrotal junction, unless immediate treatment be instituted, a grave condition presents, appalling even to the medical attendant. Tissues adjacent to and even far removed, relatively speaking, from the severed urethral ends become edematous and blackened, filled with extravasating blood and urine.

Death confronts the patient if exit is not found at once for the retained and decomposing urine. The physician realizes this all too well, and in his haste to find passageway for the locked-up waters he inserts into the urethra the rubber or metal catheter and attempts to force the same into the bladder.

Nor, perhaps, is the physician to be blamed for undertaking this seemingly logical maneuver. There is in text-books devoted to genito-urinary surgery a lack of clear detail concerning the management of this serious injury, and in nearly all to which I have access the wording of the paragraphs on the treatment is such that catheterization is given prominent attention—in some it is even recommended. This is decidedly wrong, and the inferences from such teaching have undoubtedly in the past been responsible for deaths.

The following rule should be universally observed: Whenever there is good reason to suspect, or there is known positively to be, a rupture of the urethra, a catheter or sound under no circumstances should be introduced into the urethra as a diagnostic or as a therapeutic measure.

There is a reason for this; nor is it that false passages may be produced through the edematous and infiltrated tissue. This accident, always possible in this condition, is serious in itself. The more important reason, however, is that the passage of a catheter subjects the injured tissues to the insult of infection, and infection in this devitalized area can in a few short hours easily turn the patient's chances from a practically certain recovery under proper treatment to the edge of death.

Why does cellulitis here so speedily depress the scales? Because the infection is under constantly increasing tension; the extravasating urine and blood and rapidly forming pus find no runways to the surface from the confines of the slowly yielding layers of fascia and skin. Tissue destruction and septic thrombus formation in the venous plexuses are very rapid, and toxic absorption increases proportionately with the tension. Toxemia, pyemia, septicemia, may, therefore, be the result of the passing of a catheter when traumatic rupture of the urethra is present.

But it will be said that the passing of a sterile catheter under the most aseptic precautions can not possibly be responsible for so disastrous a train of consequences. Yet it can—the trauma inflicted by the passage of a catheter along the urethra increases the virulence of, or makes virulent, the micro-organisms which have their habitat in the urethra. Among these are diphtheria bacilli, streptobacilli, and even streptococci. They are carried along to the area of laceration. What inviting pastures

*Read before the Pacific Association of Railway Surgeons, San Francisco, Aug. 29, 1908.

lie before them in the bruised, bleeding and urinous tissues!

Minor grades of urethral tear, manifesting only slight bleeding from the meatus, but little pain and difficulty in micturition should be treated by watchful expectancy. Nature will repair the damage which is limited to lacerations which do not extend completely through the muscularis.

When the surgeon sees a patient shortly after a history of severe perineal traumatism, and there is great pain experienced, extreme difficulty in forcing a few drops of urine through the meatus, or utter inability to do so, hypogastric distress, and symptoms of hemorrhage, immediate simple urethrotomy on a grooved staff should be performed. The two ends of the torn urethra should be approximated over a catheter by catgut sutures and the catheter fastened to be retained for a few days. The perineal wound should then be closed around a drainage tube, to remain in position for forty-eight or perhaps sixty hours.

When several hours have elapsed after the infliction of the injury and there is great retention, extensive infiltration and extravasation of urine and blood, with the patient appearing anxious, his condition bordering on shock and perhaps death not far distant, if relief is not obtained through the securing of free outlet from the bladder, which is the clear and urgent demand of the situation, do not further jeopardize life by attempted passage of the catheter, but at once deeply incise the perineum. The pent-up waters and blood will gush forth and two results will be at once attained—the patient will be able to pass his urine, his life thereby being saved, and with the tissues relieved of the tension destructive processes will be limited. Clotted blood can be easily turned out of the wound and any fresh hemorrhage arrested. Tube drainage should be placed. After several days, when the parts have almost reached normal again, the wound may be reopened, the ends of the severed urethra found and approximated as above over a catheter. This should be removed in five or six days. After healing is complete, systematic sounding should be instituted to prevent the development of stricture by the contraction of the scar.

Following is the report of a recent case:

Patient.—J. L., a powerfully built man of 50 years, quartermaster on the steamship *Curacoa* of the the Pacific Coast Steamship Company.

History of the Injury.—On June 20, 1908, shortly after the ship passed out of the Golden Gate, bound for Mexico, J. L., was about to descend from the quarter to the saloon deck. He slipped on some brass plating at the head of the ladder, and in some inexplicable manner was thrown across one side rail of the ladder, striking on his perineum. Above him was an iron hand-rail, parallel with the side ladder-rail and curving to meet the ladder-rail at the foot of the ladder. J. L. slid down the ladder-rail and jammed up with terrific force on his perineum at the angle of junction of the side and hand-rail. He stated that the pain was agonizing. He was able to walk away to his quarters. Soon he found that he was unable to pass his urine, and in a few hours noted his scrotum beginning to swell. The ship continued on her course, reaching the Santa Barbara channel the next afternoon, June 21, about twenty-three hours after the accident. She put into port here, and J. L. was carried ashore.

Examination.—I saw the patient soon afterward at the hospital. He was suffering intensely and was very anxious and restless; his pulse was 94, and temperature 99 degrees. Examination revealed a blackened, tense and bulging perineum enormously distended and blackened scrotum and penis, swelling and discoloration in the abdominal wall, reaching to the umbilicus, and slight discoloration in the buttocks.

Diagnosis.—Rupture of the urethra anterior to the deep perineal fascia, with extravasation into the usual areas.

Operation.—Under ether deep perineal section was done at once, and a great quantity of urine and clotted blood spurted from the incision. More clots were cleaned out, and tube drainage placed in the wound. An incision was also made into either side of scrotum, through which there was much discharge.

Postoperative History.—Drainage was free for two or three days and the tissues rapidly assumed normal dimensions, though the discoloration lasted a couple of weeks. The patient was able to pass his urine through the perineum as necessity required. Six days later, on June 27, the patient was again anesthetized and the perineal wound enlarged. A catheter was introduced through the meatus, and was guided into bladder, the proximal end of the urethra being readily found. The urethra was almost completely severed just beneath the symphysis, a narrow strip of superior wall only being intact. The ends were retracted about three-fourths of an inch. They were approximated by catgut mattress sutures over the catheter, which extended just into the bladder. The perineum was closed, leaving drainage through the lower angle. The catheter was removed in six days, after which the patient voided his urine in the natural way, a little at times seeping through the perineal wound. He passed from observation in another week, having, on the day he left the hospital, taken a 30 French sound with ease. He was enjoined to see a physician regularly for some months, to have sounds passed.

Dixon[1] emphatically recommends immediate suprapubic cystotomy with retrograde catheterization in all severe cases of traumatic rupture of the urethra. He asserts that this is the proper course to pursue because it will be, through perineal section, almost invariably impossible to find the proximal end of the torn urethra in the bloody edematous tissues; that this end will be retracted and inverted, so curled on itself as to fill and block the lumen of the canal; and that this inversion, together with the blood clots between the severed ends, will interfere with the passage of urine from the bladder. Retention is, therefore to be relieved and the proximal end of the urethra found only through suprapubic opening.

It seems to me that this rather severe measure can be necessary but very rarely, and then not as a first treatment. If extensive urinary and hemorrhagic infiltration be present the prime indication is to save life and limit destructive processes. These ends are secured by simple perineal section, with perhaps the shelling out of clots. With the tissues relieved of the tension, and drainage free, the flow of urine from the bladder will have more than sufficient force to turn out again the inverted proximal urethra.

Several days later will be found not too long a time following the injury to hunt for and repair the urethra, the distal end of which is always found by catheterization through the penis. The proximal end should be readily found in tissues which are practically normal again by following the perineal sinus to the bottom. If it should be found impossible now to locate the desired end, then only is retrograde catheterization an indicated procedure.

In conclusion I wish to reiterate the caution that a catheterization either as a diagnostic or as a therapeutic measure in traumatic rupture of the urethra is to be condemned.

905 State Street.

1. Surg. Gynec. and Obs., January, 1907.

LUMBAR APPENDICECTOMY.*

CHARLES G. LEVISON, M.D.

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SAN FRANCISCO.

The following paper was suggested to me by Legeu's contribution[1] on "Lumbar Appendicectomy." This article referred to the removal of the appendix in the course of an operation on the kidney, such as Edebohls[2] has already advocated, while the operation about to be described was performed for the purpose of reaching an appendix acutely inflamed, which had been diagnosed as being in the retrocecal position.

When the abdomen is opened during an attack of acute appendicitis, it is not infrequent that the search for the affected organ is futile. As this is not a new or a unique experience to many operators, it is my belief that, in cases such as these, the appendix might be discovered if sufficient care were taken to determine its position previous to operation.

Localization can not be accomplished unless the so-called "McBurney's point" be ignored to a certain degree, because involvement of the appendix can be diagnosed by means of this point only when the appendix is found within this area.

ILLUSTRATIVE CASES.

A case which bears out the above statement occurred in my experience recently. An operation on a young woman revealed a gangrenous appendix situated in the pelvis. The necrotic organ had produced an abscess with consequent bowel obstruction. The case presented many of the signs of an acute appendicitis, but, as McBurney's point was not painful, the diagnosis of appendicitis was not made by the attending physician. As the point of tenderness was low, occupying the brim of the pelvis, and as the examination per vaginam revealed some thickening too high up to be tubal, I made the diagnosis of appendicitis. This was confirmed at operation. The incision at the operation was made quite low. The appendix was consequently found with much greater ease than would have been the case had the abdominal wall been incised in the usual position.

The condition which first attracted my attention to this subject occurred in the following case:

Patient.—An individual who had never been sick prior to his present illness, at which time he was seized with a violent abdominal pain. He was given a cathartic and on the following day was fairly comfortable; temperature 100.6; pulse 90. On the day following he was not ill but there was some abdominal tenderness on pressure. He was brought into the hospital the following morning by his family physician, with a temperature of 102.4; pulse 96. He had no pain on movement, but had some tenderness to pressure.

Examination.—I saw the patient at 3 o'clock in the afternoon; temperature 102; pulse 100; leucocytes 18,000, 80 per cent. of which were polynuclear. When questioned as to whether he had pain he answered that he had none. He had no pain on movement, and was able to turn in bed without discomfort. Abdominal examination revealed no tenderness whatever at McBurney's point or in the right iliac region. Deep pressure made in the region of the anterior superior spine (lumbar region) caused the patient considerable pain; at this point there was marked rigidity. Dulness in the right flank corresponded to a continuation of the mid-axillary line. The dulness, while it was not continuous with the liver dulness, occupied the right lumbar region almost completely. The tympany of the colon could be elicited so that the dulness was tympanitically dull, not absolute. There was no jaundice present.

Diagnosis.—The diagnosis of retrocolic appendix was made to the exclusion of gall-bladder condition; as the urine was normal, a perinephritic abscess was ruled out. This conclusion was reached in consideration of the tympanitic area between the dulness and the liver, despite the fact that the appendix region did not appear to be involved.

Operation.—An incision four inches long was made two finger-breadths above the crest of the ilium extending to one inch in front of the anterior spine. The gridiron operation was performed with more difficulty than is experienced in front on account of the thick bellies of the abdominal muscles which were encountered. There was no trace of exudate or fluid found within the abdomen when the peritoneal cavity was opened. Palpation of the colon, in front and behind, did not reveal the presence of the appendix and it was only by strong retraction of the colon forward that its posterior surface was exposed and with it a gangrenous appendix which extended from the anterior superior spine to the under surface of the liver. The appendix was gangrenous from its base to its extreme tip; there was no induration and nothing to indicate the presence of the appendix, which would never have been discovered if it had not been exposed to direct view. It was removed by ligation.

Postoperative History.—Convalescence was without particular incident with the exception of the formation of a fecal fistula, which closed within three weeks.

That the localization of the appendix is not easy of accomplishment and that it is open to error was shown by the history of the following case, which came under my observation during the same week that the previous case was observed:

Patient.—A woman who had never been sick was taken ill the day before with severe abdominal pain. She gave no history of gallstone disease. The conjunctivæ were slightly icteric. The physician in charge reported a slight dulness in the flank and some tenderness on pressure in the iliac region; temperature 101; pulse 100.

Examination.—The day following the patient was brought into the hospital with a temperature of 101.2 and a leucocyte count of 30,000, of which 90 per cent. were polynuclear. Dulness extended quite up to the liver and down to the crest of the ilium, filling the right flank. Here tenderness to pressure was pronounced. There was no trouble in the region of McBurney.

Diagnosis.—With the experience of the previous case it was felt that a similar condition was present but gall-bladder disease could not be ruled out because of the icterus and on account of the dulness which extended upwards and was continuous with the liver dulness. The existing jaundice should have attracted more of our attention to the gall bladder than it really did, but in view of our previous experience, a diagnosis of retrocolic appendix was made with due consideration of gall-bladder disease. The gall bladder was not seriously considered, as the anatomic situation of the dulness was not that of the gall bladder but was well away from the costal angle.

Operation.—Lumbar operation for a retrocecal appendix was performed, but at the upper end of the incision a distended gall bladder was seen. The incision was closed at once and the abdomen was opened by a right rectus incision. A large, thick distended gall bladder was exposed. The ducts, which were covered with exudate, were adherent to the intestines. The gall bladder was full of stones. It also contained a partially decolorized fluid. The operation was performed in the way usual for acute cholecystitis.

Convalescence from the operation was uneventful.

The history of this case is quoted for the purpose of showing how difficult at times the diagnosis becomes when this localization is attempted. It is believed, how-

* Presented before the Alameda County Medical Society, July 21, 1908.

1. Presse méd., 1908, No. 43.
2. Ann. Surg., 1902, p. 137.

ever, that if the jaundice had been more seriously considered, the process would have been recognized.

RECAPITULATION.

The rule to be observed in the surgery of the appendix is, to make the incision correspond to the position of this organ. It can frequently be localized if the situation of the exudate and the rigidity are kept in mind.

When the exudate is situated in the loin, a diagnosis of a retrocecal appendix should be made, excluding, as far as possible, perinephritic abscess and gall-bladder disease. If low down, the differentiation from pelvic disease should be made. Naturally the classic form must first be thought of.

On looking over the literature, I find that this subject, strange to say, has been almost entirely overlooked.

About thirteen years ago, at a time when it was considered good surgery to hunt for the appendix, despite the condition of the patient, my practice was to discontinue the search as soon as I realized that this could not be properly and successfully accomplished. Largely through the influence of J. B. Murphy, this practice has now been adopted, so that to-day it is an accepted principle that this search should be discontinued under the conditions indicated. It is my conviction that, in those cases in which the appendix is not discovered, the offending organ is situated in the retrocecal space. With the appendix in this position and the abscess incised in the usual manner, either through the Lennander or McBurney incision, the pus is evacuated, but the appendix is not discovered because it is practically extraperitoneal. On several occasions in my experience, when the appendix has not been found at the operation and when a recurrence has taken place, the diseased appendix at operation, in each instance, has been found in the retrocecal position and then only after a long and tedious search. I fancy similar experiences have occurred to many surgeons.

616 Union Square Building.

CASES PROBABLY MYCOTIC, BUT NOT EVIDENTLY DUE TO BLASTOMYCES.

M. B. HUTCHINS, M.D.

ATLANTA, GA.

CASE 1.—*Patient.*—Male, aged 51. He had a rounded nodule in the middle of his right cheek three or four years before the date of the examination referred to below. I saw him once at this time. Later he was subjected to various escharotic treatments. When he returned to me he brought from a competent pathologist the simple diagnosis of "cancer." Within a short time I requested that he get the pathologist to make another examination microscopically. This was refused because the latter believed his original diagnosis correct.

Examination.—January, 1902. The disease occupied an area from the right zygoma over the lower one-third of right cheek and chin, as well as slightly below inferior maxillary border and a little under the ear. The unbroken parts were livid, swollen, the surface partially cicatricial, partially open and irregular. In the raw surface and in the borders were pits from the size of the finger-tip to real subcutaneous cavities from which could be removed a most offensive white granular substance, like fresh butter grains, and pus. The odor was that of intensely sour buttermilk, which permeated the office for an hour after the removal of the dressings. There were no fine verrucous growths but some fleshy papillomata. The pus and white substance eventually burrowed in the subcutaneous tissues of the right temporal region over an inch. There was no carcinomatous hardness and no metastasis to glands. The striking features of this case were the white granules in the pits and cavities, the intense secondary pus infection, and the offensive sour buttermilk odor. Microscopic examination of granules and pus in caustic potash solution showed structures resembling fat cells from which the oil had been dissolved.

Treatment.—*X*-rays were employed for the greater part of a year, with some benefit, but there was final extension of the trouble. Iodid of potassium, even in large doses, had little, if any, favorable effect.

Clinical Course.—The patient was finally reported ill of pneumonia. I did not see him. He possibly died of extension of the disease to the right lung. Cultures could not be made and further microscopic examination was not to be had. There was no actinomycosis.

Summary.—The clinical course of this case was not that of blastomycosis or of any form of cancer. The large pits and cavities containing and forming white granules and abundant pus were unique. The edges were swollen, hyperplastic, livid—often showing soft-topped abscesses. (Compare with Case 2.). At times healing would occur in parts, with scars resembling those from an escharotic, or fire, but the scar tissue had no permanence, new abscesses occurring.

CASE 2.—*Patient.*—Male, farmer, aged 36. About a year before the date of the examination mentioned below, he had picked a scaly papular lesion on the carmine border of the lower lip. He soon developed symptoms as at present. He then used a concentrated infusion of the leaves of the oxalis (sheep sorrel) and other caustics, destroying all but those rounded, retracted "hillocks" of the lower lip. The disease occurred below, with redness and swelling involving the whole chin and causing some enlargement of the submental glands. Each half of the chin had previously shown more marked involvement and later the lesion to the left of the left oral angle developed.

Examination.—May, 1905. There were four distinct areas, one in the sublabial fossa, one each side of the chin, one in the left oral angle. When the patient was examined first, the lower lip, down to the roots of the teeth, was destroyed save rounded remnants. On the base of the lip and on the upper chin were three semi-solid lesions; the cavities large and papillomatous, with small holes in the skin over them; the lesions full of pus and grayish-yellow granules. Just to the left of, almost in the left oral angle, lying between skin and mucous membrane was an unbroken lesion the size of a finger-tip. Incision exposed pus mixed with a quantity of granules somewhat like those from a sebaceous cyst, but firmer, slightly resembling small fish-roe. All the diseased parts were very sensitive. There was no impairment of general health.

Treatment and Clinical Course.—The lesion was cleansed with hydrogen peroxid and dressed with 1/1000 mercuric chlorid gauze, b. i. d. Granules and pus rapidly reappeared. A saturated solution of potassium iodid was given up to 47 drops t. i. d., and some iodism. No effect was produced on the disease. A sour odor was constantly present in this case, but not so intense as in Case 1. After a few days, the chin lesions having been well incised, the cleansing was followed, once a day, with application of 95 per cent. carbolic acid, not controlled by alcohol. This had only a little effect on the formation of granules and pus or the subcutaneous burrowing. The soft papillomata in the lesions were exceedingly vascular, bleeding freely on injury. They resembled somewhat the columnæ carnæ of the heart. A few seemed to have been blanched, forming at times whitish, coral-like clumps, but very vascular at attachment. It is possible that these were infiltrated with the disease bodies. There was a marked tendency of the chin infection to burrow, forming sinuses under the skin. In these, concealed, the white granules multiplied and pus formation continued in spite of cleansing and dressing twice a day. Nearly a month after the beginning of the treatment a new point appeared in the mucous membrane of the right lip remnant, as a small, discrete, whitish erosion from which a quantity of the seedlike grains were pressed, not mixed with pus. This formed a sinus a third of an inch deep. When the patient reached 66 m. saturated solution of potassium iodid t. i. d. with no benefit, the drug was stopped. He had fourteen *x*-ray treatments, getting primary reaction; a few

beard hairs loosened. Dr. Hynds reported that he was unable to find or cultivate any growth, and saw nothing resembling blastomyces or actinomyces. When the patient was last seen after eight days' absence the verdict was reached that no treatment had been of any avail. The patient was reported to have died after rapidly increasing emaciation and gradual extension of the infection of the chin downward to the muscles of the throat and integument at the front, which left the bones bare. Death occurred about ten months after the date of first examination. Neither in this case nor in Case 1 was there any involvement of bone or periosteum.

This paper was begun nearly two years ago. The untimely death of Dr. R. W. Hynds, who did the microscopic work, together with my inability to obtain any notes of his observations, has embarrassed me in attempting a proper report. I delayed finishing the paper in the hope, thus far futile, of getting another of those anomalous cases characterized by "granules and sour buttermilk odor." Clinically these cases bore not the slightest resemblance to the blastomycotic cases or to any of the published records of systemic, deep tissue and diffuse blastomycosis. I regret the absence of opportunity to have full histology and cultural work done on these cases, and my failure, at the time, sufficiently to appreciate them.

Characteristics were white granules, often the only contents of the cysts, deep subcutaneous abscesses, with inflammatory swelling around, hard and red, becoming darker and softer; and the strikingly peculiar odor. Should another case be found it would be of interest to investigate as to the probable presence and effect of the *Bacillus acidi lactici*.

Epithelioma, carcinoma, actinomycosis, tuberculosis, syphilis and typical blastomycosis were not suggested by any of the symptoms. If the cases were blastomycotic they were essentially as different from typical blastomycosis as granular, plus cutaneous, tuberculosis is from tuberculosis cutis verrucosa. This comparison offers the only basis for an effort to harmonize the cases I have reported with the descriptions of typical blastomycosis.

I am indebted to Dr. Oliver H. Ormsby, of Chicago, for references and suggestions.

1015 Century Building.

BIRTH OF QUADRUPLETS.

HENRY A. NAVE, M.D.
ARGENTINE, KANS.

Mother's History.—Mrs. L. C. T., aged 35, American, weight 112 pounds, height 4 ft. 6 in., married twelve years, had had seven children, of whom four are still living; two were born prematurely at six and seven months respectively, and one died at the age of three months, cause of death unknown.

Present Labor.—I was called to attend the patient July 19, at 1:30 a. m. The os and cervix were well dilated and the amniotic sac was protruding. Within ten minutes the first child, a boy, was born; it seemed small, and on tying the cord I was surprised to find four umbilical cords braided together. Within fifteen minutes another boy was born, thirty minutes later a girl, half hour later another boy.

Description of Placentas.—There were two placentas, one with three cords and the other with one. They were delivered in a macerated condition.

The Children.—The length and weight of the children were as follows: First child, length 9 inches, weight about 4½ lbs.; second, length 8¾ inches, weight about 3½ lbs.; third length 8½ inches, weight about 2½ lbs.; fourth, length 8 inches, weight about 2 lbs. In the case of the child delivered last it was necessary to resort to artificial respiration for a few minutes. The others breathed naturally. The children seemed normally developed, though small. The second child began to nurse on the second day and was apparently the only one able to swallow. The first-born child lived 24 hours; the second, 4 days; the third, 8 hours, and the fourth, 18 hours.

The mother's convalescence was uneventful except for a slight rise in temperature for a few days immediately succeeding delivery.

Therapeutics

METRIC SYSTEM VS. APOTHECARIES SYSTEM.

To the Editor:—In looking over the pages of THE JOURNAL devoted to therapeutics, I have frequently been surprised at the disparity existing between the apothecaries and the metric system when both were given.

In many cases the equivalents are not even approximately correct and are extremely annoying to those who employ the metric system exclusively as well as puzzling to those who occasionally use both.

In the issue of Oct. 14, 1908, pages 1336-37, twelve formulas are given in which eleven are not even approximately correct and are so strikingly contradictory in the equivalent values given that a plea for a closer approximation of values seems justified.

Despite its many so-called objectionable features, there are many physicians who employ the metric system exclusively in prescribing; therefore, this loose and careless manner of giving approximate values is pernicious in its effect by encouraging slovenly methods in prescribing, and not only tends to confuse the physician but subjects the patient to extra hazard from errors in prescribing.

If we are to have equivalents given, let us have them at least approximately correct. F. A. CARMICHAEL.

The editor of the Department of Therapeutics is glad that Dr. Carmichael has brought up this subject for discussion. In the first place, the doctor does not quite understand the method with which the prescriptions which he criticises are written. If there were a stone wall between the prescriptions written in the metric system and the prescriptions written in the old system they could not be farther dissociated than they are intended now to be by the word "or." If the amounts were intended to be equivalent the sign of equality would be used. The hypothetic stone wall is represented by the word "or." This saves writing the ingredients of the prescriptions twice. It would, of course, be difficult for a devotee of the old system to attempt to convert his thoughts and doses from that system, in any given prescription, into the metric system directly opposite.

The prescriptions in both systems are written, i. e., the liquid ones, with the idea that the dose should be represented by a teaspoonful. It is foolish to consider that a fluidram is a teaspoonful, or that the metric system equivalent to a fluidram, 4 c.c., is a teaspoonful, because they are not. It should be recognized that a teaspoonful represents 5 c.c., considerably more than a fluidram, and that by the use of the teaspoon as a measure of dosage no three fluid-ounce mixture will ever represent twenty-four doses (as it does twenty-four fluidrams), but approximately eighteen doses, of 5 c.c. each, viz.: the three ounces would represent about 90 c.c. of fluid.

The criticism is naturally then made that we should insist on the use of medicine glasses graduated to flui-

drams or graduated to cubic centimeters. While this is theoretically correct, few patients will obtain such graduated medicine glasses and take their medicine from them; hence the physician who always prescribes doses graded to 4 c.c. or to a fluidram will find that to the majority of his patients he is really administering a teaspoonful, or 5 c.c., or a fourth more than a fluidram. In other words, the majority of his patients would receive a larger dose than he intended.

The prescriptions written in the Department of Therapeutics are not aimed to instruct any physician how to transpose one system into the other. They are intended to be entirely dissociated, so that the men who write in the metric system should use the metric prescriptions if they approve of them, and the men who write in the old system should use the old system prescriptions if they approve of them. For instance, in the metric system, if the tincture of digitalis is ordered, 25 c.c. would be a correct and sensible amount based on the metric system; 30 c.c. or a fluid ounce is really absurd. If, on the other hand, it is for a devotee of the old system, then one fluid ounce is ordered. Naturally these two prescriptions differ by 5 c.c. or 1¼ fluidrams (or really more, as 31 c.c. is perhaps nearer the exact equivalent of 1 fluid ounce). However, when the dose is put down as ten drops, in water, three times a day, after meals, it does not make a particle of difference whether those drops are dropped from a bottle containing 25 c.c. or 30 c.c.

The criticism will then be made that a drop or a series of drops is exceedingly inaccurate dosage, that the dose should be measured in minim glasses or in glasses graduated to fractions of a cubic centimeter. This, too, is theoretically correct, but, except in institutions, practically useless. Not many of our patients will obtain such graduated glasses. Also the variation of where they will read, the demarkation between too much and too little in graduated glasses, in other words, as to where the meniscus of the fluid is, is such that variations will constantly occur of from one to three drops. Also when we recognize the variations in the strength of the different preparations, especially of tincture of digitalis, the dose can never be graded with measuring-glass accuracy. The dose is always enough for the object to be attained. In other words, if ten drops dropped by this patient or nurse from this particular bottle of this particular strength of tincture of digitalis is not sufficient, more must be given; if too much, less should be given.

Also the subject of exact scientific dosage becomes ridiculously absurd and hopelessly hopeless when we scientifically figure out the exact dose of a drug that we wish a patient to receive and the number of doses to order, and then find that more than frequently, unless the drug is a poison or the preparation is exceedingly strong, the pharmacist will not even bother to measure that preparation if it is a liquid, but will pour into his one, two, three or four-ounce bottle what he thinks is right, and our scientific mental processes are all useless.

Take, for instance, a simple desire on the part of the physician to put a fluidram of syrup of ipecac into a three-ounce cough mixture, or 5 c.c. of syrup of ipecac into a 100 c.c. cough mixture, just for the action of the small dose of ipecac on the bronchial mucous membrane, and he is astonished to find that time after time this supposed little bit of a dose of ipecac is nauseating his patient. It is easy to conceive what has happened when one works a short time behind a drug-store prescription counter. Also the variations in strength of the same preparation of the same drug bought at different drug stores makes the accurate measure of the final dose from the bottle absolutely useless. The dose of a drug or of a given preparation is always *enough, and enough can only be determined by the action of the first few doses.*

To go back to Dr. Carmichael's question of equivalents: Nothing has defeated the adoption of the metric system so much as has the endeavor to compute equivalents. The irregular metric figures of the physician who *thinks* in the old system and *writes* in the metric system is almost pitiful. If he wishes to write a prescription in the metric system, say for the sulphate of quinin, he should forget that a grain is 0.065 gram, but know that a small dose of quinin is 0.05 gram, and he may multiply this to what he wishes to give, whether 0.10, 0.15 or 0.20 gram. In other words, a dose of a drug that has a range of from 1 to 10 grains can not disturb a patient much by the variation of 0.1 or 0.015 gram. If one wishes to acquire the ability to write prescriptions in the metric system he should think of the metric system as dollars, cents and mills, and even forget dimes. If a dose of any drug is 10 grains, the range of dose is almost surely from much less to much more; consequently such a dose in the metric system would be 0.50 gram or 0.75 gram. If the dose of a liquid preparation is 1 or 2 fluidrams it certainly is also 5 cubic centimeters. If a dose is 1/60 of a grain it is, of course, simply 0.001 gram.

To reiterate, it is desired that all readers of the Department of Therapeutics should remember that there is no attempt at exact equivalents between prescriptions in the metric system and the same prescriptions in the old system, but each prescription in each system is intended to be absolutely correct pharmacally, chemically and therapeutically.

JOINT TUBERCULOSIS.

It can not be too frequently urged that a persistent disturbance in a joint should be suspected of a tuberculous cause. If the trouble is tuberculous the sooner the part is immobilized and the patient relieved of the depressing influence of pain and then given the best food and the most fresh, clean air treatment possible, the quicker his opsonic index rises and his ability to stay the disease is developed. In other words, the prognosis is good if the joint is properly treated early. If the diagnosis of the trouble in the joint is doubtful, the ocular tuberculin reaction may be tried, or possibly the von Pirquet cutaneous tuberculin reaction may prove as valuable in joint tuberculosis as it seems to be in early pulmonary tuberculosis. Chronic pain is so depressant to the nervous system, to the general nutrition, and to the circulation, as to prevent the normal healing power of the system. Consequently pain in a tuberculous joint must be stopped.

Dr. Edward H. Ochsner, Chicago (*Journal of the Michigan State Medical Society,* August, 1908), emphasizes the necessity of not only immobilizing a tuberculous joint, but of placing the muscles surrounding the joint "in accurate equilibrium," and contraction of the opposing muscles will not be caused and the pain will be diminished or prevented. With such care, morphin or other sedatives will not be needed (and no drug will prevent pain that will not also inhibit general nutrition).

Pain having been thus inhibited, the next aim should be to prevent secondary infection, and Ochsner states that fully 98 per cent. of patients with tuberculosis of the spine can be permanently cured if secondary infection is prevented. A cold abscess or a tuberculous breakdown Ochsner does not think should be classed as pus in the ordinary sense, and consequently should not always be evacuated; but if evacuated, every possible precaution should be taken to avoid secondary infection. A local tuberculous abscess is ordinarily a self-limited disease, but when complicated with secondary infection it becomes a serious malady. If secondary infection occurs, severer operations of removing sinuses, etc., must not be needlessly undertaken, as the patient gets well or improves from the ability of his blood serum to fight the toxins of the tubercle bacillus. An aid to his fighting power is furnished by injections of tuberculin after the method of Wright, but the proper dose and the proper time for such injections are determined by the patient's opsonic index. If the injection is administered at the wrong time his opsonic index will be lowered instead of raised. After any great depressing influence on the patient, as after a period "of poor food, poor ventilation, severe chilling, or the shock from an operation, or even when the patient is suffering from as simple a thing as obstinate constipation, it is not the time to inject tuberculin." This should be postponed until a time when the patient is beginning to rally from such depressing influences.

When there is secondary infection the prognosis, Ochsner says, has been much improved by not performing too serious operations, by using tuberculin injections, as indicated by a careful study of the opsonic index, and by treating the tuberculous sinuses by Dr. Emil Beck's method. Dr. Beck advises injecting into the tuberculous sinuses, "every two to four days, a sterile bismuth paste consisting of thirty parts of bismuth and sixty parts of vaselin at a temperature of 110 F." If after repeating this injection three or four times at the above intervals the sinus has not stopped discharging, it should then be injected "with a paste consisting of thirty parts of bismuth, sixty parts of vaselin, five parts of white wax, five parts of soft paraffin and one part" of the official liquor formaldehyd. Ochsner says that by these methods patients are not only more frequently cured, but the joints more frequently remain mobile. In other words, ankylosis is less likely to occur. He feels certain that prolonged immobilization of the joint does not tend to ankylosis, in fact quite the reverse, hence it should not be feared to keep a joint permanently immobilized too long.

In immobilizing a joint two things should be kept in mind: First, the joint must be at ease, with each surrounding muscle at rest and not stretched or irritated. Second, the splint should be as light as possible and still give complete immobilization. To accomplish the first object Ochsner fixes the diseased ankle joint with "the foot at a little less than a right angle to the leg." If it is properly applied the twitching of the muscles and pain will soon cease, and while it may be necessary for the patient to remain in bed for a few days, he may soon be allowed to go about on crutches. As soon as he can step on his foot without pain the crutches may be discarded, a soft leather shoe placed over the cast, and the patient allowed to resume his ordinary occupation.

The correct position "for the knee joint is immobilization at an angle of about 175°. The cast should extend from the tuberischium to the malleoli," but the whole cast should not weigh more than two pounds. So long as the knee is painful the patient may go about on crutches with a high-soled shoe on the other foot, but as soon as the patient can bear his weight on the affected leg without pain the crutches and high sole may be discarded.

"In the hip the position of muscle equilibrium is 10° of abduction and 5° of ventral flexion, and the cast should extend from the level of the umbilicus to a little above the knee." As a rule Ochsner would not apply extension, although sometimes it is advisable to use Buck's extension at night. The patient walking about with a crutch and a high sole under the other foot gives the necessary extension. Again as soon as the patient can bear his weight without pain Ochsner would take away the crutches and the high sole.

"In tuberculosis of the fingers, hand or wrist the cast should extend from the tip of the fingers to within two inches of the elbow, and the fingers, hand and wrist should be perfectly straight.

"At the elbow the cast should extend from the wrist to the axilla and the arm and forearm should be at right angles.

"In the shoulder the arm should be strapped to the chest with adhesive straps with a small triangular pad in the axilla. The cap is now applied over the shoulder and held in place with a soft roller bandage. The forearm is then placed in a sling."

Ochsner believes that the best cast is made of plaster-of-Paris applied over stockinette and then reinforced by wheat gluten bandages. The length of time a cast should remain in position can not, of course, be definitely stated, but as Ochsner believes that ankylosis is not caused by prolonged immobilization the cast should be kept on long enough, and in the case of the hip joint he makes it a rule to leave the cast in place six months after he is convinced the tuberculosis is healed.

If a patient be first presented for treatment with a very painful joint, partial ankylosis in bad position, and is emaciated, Ochsner would anesthetize the patient, place the joint in the position above described as the best, immobilize it, give subsequent hypodermatics of morphin sufficient to control pain and muscle spasm, and when such has entirely subsided, begin on the tuberculin treatment when the opsonic index shows it is indicated, this procedure, of course, being carried out in combination with the usual fresh-air treatment of the disease.

Acute Yellow Atrophy of the Liver in Pregnancy.—A. Bertino's monograph on this subject fills the *Ginecologia* of July 31, 1908. He has had occasion to observe nine cases of epidemic jaundice in pregnant women, including two in which it assumed a malignant form. He warns that jaundice in a pregnant woman, although apparently very mild, may at any moment assume the maligant form and develop into acute atrophy of the liver. The causes of this transformation into the graver form are manifold, but of most importance are those which induce changes in the parenchyma of the liver, which during pregnancy is in a condition of reduced resisting power on account of the extra work imposed on it and the possibilities for autointoxication. Twin pregnancy and affections of the blood (anemia), on account of the fatty degeneration of viscera, liable in this condition, may aid in transforming simple jaundice into the fatal form. The symptoms suggest an acute process of autointoxication, like eclampsia.

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[*For other information see second page following reading matter*]

SATURDAY, NOVEMBER 28, 1908.

REPORT OF THE SURGEON-GENERAL OF THE ARMY FOR 1908.

In his annual report[1] for 1908 Surgeon-General O'Reilly gives some interesting information in regard to the health and sanitary conditions of the army at home and abroad. Admission, death, discharge and non-effective rates are all better than for last year and show progressive improvement since 1898. The improvement is principally in the group of preventable diseases, except tuberculosis and malaria. The admission rates for typhoid fever and for malarial fevers are the lowest of which there is any record in the surgeon-general's office.

As regards tuberculosis, the conditions are unsatisfactory. The measures suggested to control tuberculosis are greater care in the examination of recruits to exclude incipient cases, and better housing conditions, including larger initial air space and more effective ventilation. With regard to venereal diseases, it is hoped to accomplish something by teaching the enlisted men personal hygiene and by getting a better class of men, but it is not believed that any great diminution of non-effectiveness from this cause will be obtained until venereal diseases are included among the group of infectious diseases for which compulsory notification is required.

The most important causes of deaths from disease in the army for the year are, in the order of their relative importance, tuberculosis, pneumonia, cerebrospinal fever, typhoid fever and heart disease. Comparing the different countries in which United States troops were serving, it is shown that Alaska, as usual, had the lowest constantly non-effective rates, while the Philippine Islands had the highest. Comparing our own army with those of foreign countries, it is noted that our admission, death and non-effective rates are higher than in most other armies. This is not necessarily to be taken as indicating less effective sanitary precautions. There are many factors which must be considered in making this comparison. For instance, our army is the only one which includes in its admission rate cases treated in quarters, and while our death rate is higher than that of most other armies, yet when we are able to obtain a total loss rate, which is the sum of deaths and discharges for disability, our rate compares favorably with European armies. It is evident that by promptly discharging soldiers who are likely to die and allowing them to die out of service, a fictitiously low death rate can be obtained.

In regard to sanitation, the surgeon-general makes an appeal for more executive authority for his department in sanitary matters, and also that all special apparatus used in sanitary work and in the care and transportation of the sick, such as ambulances, water carts, water sterilizers, disinfecting apparatus, etc., should be purchased and supplied by the medical department. This seems such a reasonable and common-sense proposition that the wonder is it has not been done long ago. He speaks of the active anti-mosquito campaign which has been conducted for several years past and shows that the tremendous reduction in admission rate for malarial fevers is sufficient of itself to justify the additional cost of such measures. Attention is called also to the importance of house flies as carriers of disease, and, with a view to preventing the breeding of flies on military reservations, recommendation is made that all accumulations of stable manure should be kept in fly-proof rooms.

In Cuba a serious outbreak of typhoid fever which occurred in the preceding year is reported as being under control, although the admission and death rates are still much higher than in the United States. It is interesting to note that the medical returns show far less dysentery among the troops in Cuba than among those serving in the Philippine Islands. Indeed, it is believed that most of the cases reported from Cuba were recurrences of infections contracted in the Philippine Islands.

In the Philippine Islands all the rates were better than for the preceding year. The death rate, 6.92 per 1,000, is the lowest ever attained there. The principal factors in the improved morbidity and mortality statistics in those islands are the marked falls in the rates for malaria, dengue, and the eruptive fevers, diarrheal diseases and diseases of the skin. As concerns sanitation in the Philippine Islands, the surgeon-general recommends that at all permanent posts the construction of barracks and quarters should be of a permanent character. The buildings should be specially designed for tropical service; thoroughly screened against flies and mosquitoes; provided with porches to keep the sun's rays from the walls and with a concrete base to protect them from the subjacent soil dampness. Their construction should probably be concrete, with native hardwood floors and tile roof.

The Board for the Study of Tropical Diseases in the Philippine Islands reports the discovery of four cases of pulmonary paragonimiasis in one company of Filipino scouts serving in Samar, and two more in another

1. Commented on in General News, THE JOURNAL A. M. A., Nov. 21, 1908.

company serving at the same station. They also report a fatal case of infection with the *Schistosomum japonicum* in a Filipino scout.

The surgeon-general reports the reorganization of the Medical Department and the organization of the new Medical Reserve Corps in accordance with the act of April 23, 1908. Aside from the active members of the Reserve Corps, an inactive list has been constituted, which includes many of the most eminent physicians and surgeons in the United States. These men have consented to accept commissions in the corps without compensation and entirely from patriotic motives.

ENLIGHTEN THE PUBLIC ON FRAUDULENT MEDICAL CONCERNS.

In another column will be found details concerning a quack "institute" which has been excluded from mail privileges as a fraudulent concern. This makes the third article of the kind published in THE JOURNAL, the preceding ones being the Reinhardt case[1] and the Hibbard case.[2] These matters, of course, have little of scientific interest, and there are some, doubtless, who wonder why so much space is devoted to subjects that are really more fit for the general newspaper than for a medical journal. The answer is simple: The newspapers, as a rule, are so closely in bondage through their advertising columns to these concerns that, even if the matter were offered them, they would not publish it.

The present exposure is a typical exemplification of the tricks by which the public is constantly being defrauded. The assertions of the promoters of this fraud are typical of the falsehoods which underlie, so far as we have investigated, all these "cures;" for example, (1) that a new treatment, unknown to the medical profession, has been discovered, the actual fact being that the method is well known to, and used by, that profession for what it is worth, but with an understanding of its limitations; (2) that physicians of more than ordinary skill are employed by the concern, when, in fact, in so far as the work is done by physicians at all, such men are of low grade as to their grounding in general professional knowledge, and on good grounds, other than the present indictment, they are usually professional outcasts; (3) that individual care is given to the peculiar features of each patient's case; when, in point of fact, a stock diagnosis is made and a hotch-potch treatment applied, indiscriminately or with trifling or haphazard variations, to all alike—the very thing, the least appearance of which in a physician's dealing with his patient, leads to the resentful, but generally unjust, complaint, "He didn't pay sufficient attention to my case;" (4) that the treatment is harmless and not costly, while in fact the former claim is frequently untrue and the latter always so. It is simply an immoral mode of trading, in which the sale of a few cents' worth of material for tens, hundreds, or even thousands of dollars is forced by false pretenses on the individual, according to his available financial resources and his gullibility.

The facts presented are not new to physicians, who know that all these "mail order" concerns are, without exception, the schemes of swindlers—of vampires who prey on the ignorant sick or on those who have been led to believe they are sick by the advertisements circulated by the concerns themselves. The sufferers from consumption, locomotor ataxia, cancer, epilepsy and other more or less incurable diseases are a particularly easy prey. Like the proverbial drowning man, they are ready to grasp at any therapeutic "straw," however absurd or impossible it may seem to a rational mind. Even persons ordinarily sensible are, under these circumstances, so mentally unbalanced by reason of their condition that they are apt to credit as probably true the unscrupulous promises of cure held out to them by these ghouls.

Physicians may warn their patients of the fraudulent nature of these concerns, but unless they can enforce their "wise saws" with "modern instances," giving chapter and verse, their warnings almost certainly will be attributed to wrong motives and remain without effect. It is, therefore, to supply physicians with concrete and indisputable facts regarding these concerns that THE JOURNAL is publishing these articles and other similar ones to follow. But having done our duty in placing the facts at their disposition, it devolves on physicians to insure their wide dissemination. To publish these facts for physicians alone would be a work of supererogation; it is the public, and especially that portion of the public likely to be taken in the toils of these fraudulent impostors, which must have the information if it is to have any lasting effect. Valuable as was the exposure by *Collier's Weekly* of the "patent-medicine" fraud, its effect would have been only transitory had it not been for the wide and still continuing distribution of the revelations in pamphlet form from this office. This it is which has made Mr. Adams' article a living and powerful force to-day. In like manner it is our purpose to republish in pamphlet form, and at a nominal price, for distribution by physicians among their patients, the exposures of these quack medical institutes. We repeat, however, it rests with the individual members of the medical profession to use effectively the weapons which are provided them in the warfare against unscrupulous quackery and fraud.

LABORATORY GLANDERS.

The sad death of Dr. Thomas M. Wilson,[1] of Chicago, from acute glanders, in all probability contracted while engaged in experimental work with glanders bacilli, again illustrates the peculiarly grave dangers that surround workers with this bacillus. Probably no other

1. THE JOURNAL, Oct. 3, 1908, p. 1144.
2. THE JOURNAL, Oct. 17, 1908, p. 1330.

1. Recorded under "Deaths" in this issue, p. 1888.

germ has caused so many fatal laboratory infections, and the list of bacteriologists who are known to have lost their lives from accidental infection while studying the glanders bacillus is a long one, and no doubt it would be considerably longer still were it possible to collate all the cases of this kind. And then, too, there are also instances of final recovery after prolonged illness acquired in the course of laboratory work.

In some of the cases it is tolerably well known just how the occasion for infection arose, as, for example, through the breaking of a tube containing a culture of the bacillus and the spreading of the contents about the workroom or by some similar accident, but in many cases the infection has occurred without any known explanation of this kind and without any known failure in the usual precautions, so that it has seemed as if the bacillus were able to resist the usual methods of sterilization employed in routine bacteriologic work and thus to escape into the free environment of the worker. Indeed a well-known London bacteriologist is credited with the statement that he believes the glanders bacillus can withstand the sterilization the platinum wire ordinarily is given in the actual flame. Be that as it may, the bacillus is not regarded as especially resistant to heat and chemicals, and it is currently stated that it is destroyed by a temperature of 55 degrees C. in ten minutes and by 61 degrees C. in one minute, and, furthermore, that it is readily killed by a 5 per cent. solution of carbolic acid and a 1 to 5,000 solution of corrosive sublimate. The bacillus, however, is resistant to desiccation, the reported longevity under drying ranging from a few days to several months, and pure cultures are said to be more resistant than the bacilli in nasal exudate. Another feature of interest about many of these so highly regrettable laboratory infections is that the manner of entrance into the body by the bacilli is not at all clear, there being no primarily local symptoms to mark the point of invasion. It is believed that in such cases the bacilli pass directly through some part of the respiratory mucous membrane, perhaps most often the nasal, and thus cause the general infection. We know that small animals are easily infected by placing virulent material in the nose. That the bacillus has marked penetrative powers, resembling in this respect the pest bacillus, is shown by the experiments of Cornil and Babes, who produced glanders infection in guinea-pigs by placing a salve containing bacilli on the skin.

The great danger of the worker with glanders bacilli falling a ready victim to the gruesome and fatal disease they may cause makes it imperative that special precautions be taken to a much larger extent than probably is the case at this moment in the laboratories throughout the country. Investigative work with glanders bacilli is not to be lightly undertaken without due and competent consideration from all points of view. Veterinary, state and city laboratories should be prepared to care in the most ideal way for all the infectious material sent them, because this may contain glanders material at any time. Finally, it should be impressed on the individual worker, especially the young and enthusiastic who stand at the beginning of a promising career and to whom the occasional case of glanders often seems to offer interesting problems, that the tradition about laboratory glanders is not a myth but a terrible reality against which he can not guard himself too closely.

THE NATIONAL CONSERVATION OF HEALTH.

In another department[1] appears the address delivered by Dr. Charles A. L. Reed of Cincinnati, at a public meeting held under the auspices of the New York Academy of Medicine, in which the problem of the conservation of the health of the nation is discussed in a broad manner, intelligible and convincing to the layman. Putting aside both the professional and humanitarian sides of the question, Dr. Reed considers the problem from a purely economical standpoint, appealing to the people to end the terrific and unnecessary waste of human life and energy occasioned by preventable illness and death.

That the question is timely is shown by the newspaper discussion aroused by Dr. Reed's address, for seldom has a professional utterance caused such widespread comment. By showing that the financial interests involved in the solution of this problem far exceed in magnitude those of the Army and the Navy combined, and that the advice and counsel of trained physicians and sanitarians are indispensable for its proper solution, Dr. Reed has proved, with mathematical accuracy, the right of the physician to claim a seat in the highest legislative body of the nation.

Particularly timely, in this connection, is an editorial in a recent number of the *Cleveland Medical Journal* entitled "Why Should a Physician Go to the United States Senate?" The editor shows, from an analysis of the membership of the Senate and House, that out of 162 occupations recognized by the United States census, only 19 are represented in the Sixtieth Congress, lawyers constituting 76 of the 91 members of the Senate and 273 of the 394 members of the House or 349 of the total membership of 486. In the Senate alone only 10 of the 162 occupations are represented. As the editor forcefully says, in the past questions of a legal form and technical detail have been the important considerations before Congress, while to-day sociologic and administrative problems are most imperative. The necessity of broader representation, as well as the value to legislative bodies of members possessing technical knowledge of sanitary matters, is evident.

The medical profession is asking for adequate representation in Congress not only as a privilege and right

1. Special Article, page 1856.

but as a duty which it owes to the public. The favorable comment aroused by Dr. Reed's address shows that when this issue is put fairly and plainly before the people, this duty will not only be recognized but insisted on and that the people will demand that the medical profession send some of its recognized leaders to Congress in order that they may point out the way to better sanitary conditions for the saving of human life and national resources.

Few, if any, members of the profession are better qualified to lead in such a work than Dr. Reed. His high standing in scientific circles, his experience on the Panama Canal Commission, his fearlessness and integrity combined with his well-known ability as an orator and debater, combine to fit him admirably for a seat in the United States Senate. In that body his ability as a leader would soon be demonstrated. Ohio, which has already furnished so many leaders and which proudly claims the next President of the United States as her favorite son, can render an additional and valued service to the nation by sending Dr. Reed to the Senate to lead in a great campaign for national health.

THE FOUNDATION OF ETHICS.

The reinstatement of ethics as an essential constituent of all practicable social and business relations moves onward. Business organizations are beginning to realize that without a general adhesion to sound principles of right conduct commercial anarchy must ensue. The basic idea of this proposition was clearly grasped and enunciated at a recent dinner of the Chicago Business Science Club. "It is well," said one speaker, "to strike at the serpents of greed and graft wherever they show their heads, but that is not enough; we must kill not only the serpents but their eggs, we must destroy their seed. . . . In a few years all of us will have been replaced by the generations now in the public schools. We must get back to the public schools to inculcate the science of right conduct in business." Here lies the root of the matter. It is in education—that is, not mere instruction in the facts of history, geography, science, mathematics, languages or what not, but in character building—that the justification is to be found of the saw, "The child is father of the man."

The proper preparation of the young man to fit him in all respects for the pursuit of his future career is of prime importance in the case of medicine. The relations of the medical man to the public are so peculiar, so much more intimate than the relations of other classes of men to the public, that a sound ethical training should take the first place in the equipment of the medical student. Religious education of any kind always includes the principles of ethics. The secularization of the schools which accompanied the establishment of the public school system, while doubtless as right as inevitable on general principles, carried with it the disadvantage of the exclusion of systematized ethical training, and no general steps have been taken to remedy this deficiency by the institution of definite ethical courses.

In like manner the abrogation of the practice of preceptorship from medical education has eliminated a practical training in that important part of the profession of medicine, the social relations of the practitioner with the public and with his individual patients. It is essential that partially to remedy the defect in medical training arising out of the discontinuance of the system of apprenticeship under a preceptor, the formal study of ethics as applied to medicine should have an important place in the medical curriculum.[1] While the place of the preceptor can not be filled by the medical college, every effort should be made, not only to inculcate ethical ideals, but also to impress on the medical student the fact that success in medicine does not depend alone on exact diagnosis and successful treatment, and that in practice he will have to treat patients, not "cases."

THE PUBLIC SERVICE OF PROFESSIONS.

The keynote of an admirable paper by M. L. Cooke[2] is found in Professor Hadley's address on the "Professional Ideals of the Twentieth Century," in which it is stated that "a man ought to have a clear conception of the public service on which his profession is based . . . a clear conception of the public service which his profession can render and the public duties which its members owe." It is as true of medicine as it is of engineering that (*mutatis mutandis*) there are "three parties interested, viz.: the engineer, his employer and the public." It is also as true of physicians (at least until very recent times) as of engineers "that the chief service rendered to the public by the . . . profession has been one rendered indirectly by serving well the second party interested—the employer." Mr. Cooke refers to the work already accomplished by the American Medical Association toward the establishment of a proper conception of the public services due from the medical profession to the public, as pointing the way for his own profession to follow. He cites the fate of the report of John R. Freeman on the Iroquois Theater disaster as an instance of the impotence of the most important investigations into the application of technical matters to the public good, in the absence of a supporting public opinion, which must be the result of education. "There is good reason to believe," he says, "that engineers have as much to gain from cooperation with the public as they have undoubtedly gained from cooperation with each other." This is equally true of the medical profession. Among the measures that he suggests for his profession are lectures to the public and the provision of at least one lecture on a technical topic of general interest at the national professional conven-

1. In this connection, see Correspondence Department, this issue.
2. Journal of American Society of Mechanical Engineers, New York City.

tions; the formation of a committee to insure that information of the proper kind, having the requisite "news" character, shall be prepared for the use of the press; and other matters of a more limited scope. It is evident that a realization of public service as a duty of professions is in the air, and this should stimulate the profession of medicine to renewed efforts for the benefit of collective humanity.

Medical News

ALABAMA.

Medical Department Opens.—The regular session of the Medical Department of the University of Alabama, Mobile, opened October 5. Dr. William H. Saunders, state health officer, gave the opening lecture.——The opening exercises of the fifteenth session of the Birmingham Medical College were held September 30. Dr. G. W. Macon of Howard College and Dr. J. H. Phillips, superintendent of the Birmingham public schools, and others, made addresses.

Personal.—Dr. H. L. Hough, Florence, has been elected city physician by the Lauderdale County Medical Society.——At the meeting of Mobile County Medical Society, October 29, Dr. Douglas G. Campbell was elected county physician.——Dr. O. F. Cawthorn, Mobile, a trustee of Mobile Medical College, has presented to the institution portraits of four prominent physicians of the city, Drs. Anderson, Heustis, Ross and Gaines.——Dr. George R. Rau, Tuscaloosa, Birmingham, has been appointed demonstrator of anatomy in the medical department of the University of Alabama, Mobile.

Hospital Notes.—Papers of incorporation of the Sellers Hospital, Anniston, have been filed. The institution will be known as Union Hospital, and will be accessible to all physicians of the city. Drs. Edward M. and William D. Sellers are of the incorporators. The capital stock of the hospital is placed at $25,000.——Free medical aid for the sick and injured in Montgomery is announced by Dr. Gaston J. Greil, city health officer. A dispensary has been established, at which relief will be given during certain hours of the morning and afternoon, to all those who are unable to pay for medicine and treatment.

CALIFORNIA.

Medical College Under New Auspices.—Cooper Medical College, San Francisco, began its career as an integral part of Leland Stanford, Jr., University, November 3. It will henceforth be known as the school of medicine of the university.

Biennial Vital Statistics.—In the biennial report of the State Board of Health, it is shown that the births registered in the state for 1907 numbered 24,647, an increase of 3,673 as compared with 1906. The births included 12,645 boys and 12,029 girls. There were 23,005 marriages registered in the state in 1907, or 1,688 more than for the previous year. The deaths in the state numbered 31,095 for 1907, against 29,303 in 1906, an increase of 1,792, or 6.1 per cent.

The Afflicted.—Dr. Arthur Dangerfield, North San Juan, has gone to San Francisco, where he may be operated on for appendicitis.——Dr. Elmer E. Stone, superintendent of the State Hospital for the Insane, Napa, was operated on October 27, for appendicitis, and is doing well.——Dr. William W. Rumsey, Napa, underwent amputation of the third finger of the right hand, October 20, on account of infection.——Dr. William W. Fitzgerald, Stockton, who was operated on for strangulated hernia recently at St. Joseph's Home, is well on the road to recovery.

Personal.—Dr. Henry L. Nichols, for many years city physician of Sacramento, has resigned, and Dr. William K. Lindsay, acting city physician for the past year, has been selected to fill the vacancy.——Dr. William R. Dorr, warden of the City and County Hospital, San Francisco, has resigned.——Dr. Eugene C. Dunn has been selected as a member of the board of health of Fresno, vice Dr. Jackson L. Martin, resigned.——Dr. and Mrs. Edward W. Twitchell, Sacramento, have returned from Europe.——Authorization for the payment of a fee of $5,000 to Dr. Henry Harris, San Francisco, from the estate of Levi Shilling, was filed with the county clerk October 7.——Dr. William W. Cross, Jr., formerly of Visalia, has been appointed city bacteriologist of Fresno.

Society Meetings.—At the eighteenth annual meeting of the California Northern District Medical Society, held in Chico, November 10, the following officers were elected: President, Dr. Edward W. Twitchell, Sacramento; vice-presidents, Drs. William J. Hanna, Sacramento; Dan H. Moulton, Chico; and Albert Osborne, Hamilton City; secretary, Dr. Joseph W. James, Sacramento (re-elected); and censors, Drs. Wallace A. Briggs, Sacramento; Andrew M. Henderson, Sacramento; Samuel W. Langdon, Jr., Stockton; Walter E. Bates, Davisville; and John Fife, Red Bluff.——At the annual meeting of the San Mateo County Medical Society, held in San Mateo, November 9, Dr. Henry C. McClenehan, Belmont, was elected president; Dr. D. Brandley Plymire, South San Francisco, vice president; and Dr. Franklin M. Seibert, San Mateo, secretary-treasurer (re-elected).

Hospital Notes.—St. Anne's Maternity Hospital, Los Angeles, was dedicated with solemn ceremony, November 6.——As the result of "Tag Day" in San Francisco, more than $27,500 has been added to the building fund of the new Children's Hospital.——San Antonio Hospital, Upland, built only a little more than a year ago, is to have an addition of twelve rooms, which will practically double its capacity.——The Lower California Sanitarium Company has announced that it will erect a sanitarium on the border of Mexico to cost $125,000. Dr. Charles A. McQueston, Alameda, formerly president of the board of health of San Francisco, and Dr. Eduardo Liceaga, minister of health of Mexico, are said to be interested in the project.——Abbott Hospital, Richmond, has been incorporated with a capital stock of $25,000.——The San Francis Hospital Association, San Francisco, has purchased a site at Hyde and Bush streets, on which it will erect a hospital with accommodation for 200 patients.——The directors of the Peninsula Hospital, Palo Alto, have purchased a site, 225 by 275 feet, on Franklin Avenue, at a cost of $10,000. The main building will be 40 by 120 feet and is to be three stories in height and have a roof garden. The structure will be frame, covered with cement.——The Hospital and Health Committee of San Francisco have denied the application of the Oriental Hospital for leave to establish and maintain a hospital on Trenton street, between Washington and Jackson.

GEORGIA.

Tuberculosis Exhibit for Atlanta.—Steps have been taken by the Atlanta Antituberculosis Association to secure for exhibition in that city, the traveling exhibit of the National Association for the Prevention of Tuberculosis.

District Society Meeting.—At the annual meeting of the Sixth District Medical Association, held in Macon November 11, Dr. Alfred F. White, Flovilla, was elected president; Dr. James W. Cowart, Walden, vice-president, and Dr. Eugene B. Elder, Macon, secretary-treasurer (re-elected). The next meeting will be held at Indian Springs.

ILLINOIS.

Diphtheria Antitoxin Purchased.—The state board of health has placed a contract for diphtheria antitoxin for free distribution. The antitoxin will be sent to 200 agents in the state, who will issue it as required to physicians. The legislature appropriated $30,000 for this work.

Contagious Diseases in Chicago.—During the week ended November 21, there were 788 cases of contagious disease reported, distributed as follows: Diphtheria, 214 cases; scarlet fever, 212; tuberculosis, 127; chickenpox, 68; measles, 58; typhoid fever, 42; pneumonia, 25; whooping cough, 17, and minor diseases, 24. Compared with the report of the preceding week, this shows 22 cases fewer of diphtheria and 21 fewer of typhoid, an increase of 10 cases in scarlet fever and double the number of chickenpox cases.

Deaths of the Week.—The mortality report of Chicago for the week ended November 21 shows 596 deaths, equivalent to an annual death rate of 14.34 per 1,000, an increase of 31 over the preceding week and of 61 over the corresponding week of 1907. Consumption was the leading cause of death, with 77. Other principal death causes were: Pneumonia, 63; acute intestinal diseases, 54; nephritis and heart diseases, each, 50, and violence (including suicide), 38. There were reported 23 deaths from diphtheria, 13 from scarlet fever, 6 from measles, and 5 from typhoid fever.

Personal.—Dr. E. C. Dudley and family, Chicago, have returned from Europe. During his stay in Vienna, Dr. Dudley was elected an honorary member of the American Medical Association of Vienna, being the third individual to be thus distinguished, the preceding honorary members being Dr. Politzer of Vienna and Dr. William W. Keen of Philadelphia.

——Dr. B. G. R. Williams, formerly of Danville, has moved to Paris and has established a laboratory for the use of the physicians in the surrounding territory. In addition to the ordinary microscopic and chemical analyses, the modification of milk will be undertaken in this laboratory.——Dr. Daniel R. Brower, Chicago, has been appointed a member of the state committee having in charge the investigation of the Cook County Insane Hospital, Dunning.

KANSAS.

Do Not Want Publicity.—The Wilson County Medical Society, at a recent meeting, adopted a resolution requesting all newspapers in the county to refrain from mentioning physicians' names in connection with medical or surgical cases.

Kansas Missionaries in China.—Dr. J. M. Wright, formerly of Topeka, has returned to that city on a visit after nearly five years' work as a medical missionary at Tak Hing, Chow, China.——Dr. J. P. Todd, Topeka, is in charge of a hospital in Canton.

Must Not Sell Cocain.—The Kansas City Board of Health has taken up actively the cause of those fighting the sale of cocain, and has issued the following notice to all druggists within its corporate limits: "I hereby notify all druggists or drug clerks or other individuals who sell, give away or dispose of cocain or other narcotics without a prescription from a reputable physician, that they will be prosecuted to the full extent of the law, favors shown to none.

(Signed) J. A. FULTON, Secretary Board of Health."

MASSACHUSETTS.

Certified Milk for Worcester.—The October meeting of the Worcester District Medical Society, at which the Homeopathic Medical Society and milk dealers of the city were guests, was devoted to milk problems. Dr. Lester C. Miller presented a paper on "Fat-Free Milk"; Dr. Roy J. Ward, one on "Results Obtained at the Clean Milk Station Conducted Last Summer by the Fresh Air Fund"; Dr. Francis H. Slack of the Boston Board of Health, one on "Bacteriologic Examination of Milk," and Dr. R. M. Merrick, chairman of the Norfolk District Medical Commission, one on "The Value of Inspected Milk in Infant Feeding." The society voted to establish a milk commission and appointed the following members: Drs. George E. Emery, Merrick Lincoln, Lester C. Miller, Roy J. Ward, Charles L. Nichols, Edwin R. Leib, Prof. Leonard P. Kinnicutt, and T. Hivers Gage, Jr., representing the staff of the Worcester Board of Health. The commission organized with Dr. Nichols, chairman, and Dr. Ward, secretary-treasurer, and hopes soon to have supplies of certified and inspected milk to recommend to the profession.

Personal.—Dr. George H. M. Rowe, for thirty years superintendent and resident physician of the Boston City Hospital, resigned November 4. He will be succeeded by Dr. John H. McCollom, who was formerly in charge of the contagious hospital.——Dr. B. Swayne Putts has resigned his position at the State Sanatorium for Tuberculosis, Rutland.——Dr. Walter Channing, Brookline, has been appointed chairman of the board of trustees of the Hospital for the Insane in the Metropolitan district of Boston. This is under the provision of the new law, whereby the insane of Boston are to be cared for by the state in the same way as those of other towns and cities of the commonwealth. The present institutions are to be continued, but under the direction of this new board, instead of the former city board.——Dr. Paul H. Provandie, Melrose Highlands, has been appointed associate medical examiner for Middlesex County, and Dr. William O. Faxon, Stoughton, medical examiner for Norfolk County.——Dr. Guy G. Fernald, Boston, for many years a member of the staff of the McLean Hospital, Waverly, has been appointed resident physician of the Massachusetts Reformatory.——Dr. B. R. Rickards, director of the bacteriologic laboratory of the health department, Boston, has resigned to take charge of the laboratory of the state board of health, Columbus, Ohio.——Dr. Frederick L. Brush, Boston, has been appointed superintendent of the New York Post-Graduate Medical School and Hospital.——Dr. Burdett L. Arms, Boston, has been appointed assistant director of the bacteriologic laboratory of Boston.——Dr. Edward H. Trowbridge has been appointed president of the Worcester board of health.

MICHIGAN.

Personal.—Dr. Carl J. Larson, a member of the staff of Negaumee Hospital, has resigned and will be succeeded by Dr. P. S. Wilson, Grand Rapids.——Dr. Edwin R. Campbell, Flint, has, it is announced, decided to give up practice and will go into the automobile business.

Undergraduate Medical Association.—A number of the members of the senior and junior classes of the medical department of the University of Michigan perfected an undergraduate medical association last spring under the name "Medical Review of the University of Michigan, the membership of which is made up principally of assistants and members of the senior and junior classes. Meetings are held monthly, at which papers are read and matters of interest to the medical department and profession are discussed. This is entirely a student's organization, and the primary object is to get undergraduates actively interested in the matters pertaining to his chosen profession. In addition to the miscellaneous papers, the organization has started a systematic study of the history of medicine.

MISSOURI.

College Now in Good Standing.—After an inspection made recently by a committee of the Missouri State Board of Health, Barnes Medical College, St. Louis, has been restored to good standing by that board.

Fund for Hospital.—Mercy Hospital, Kansas City, will receive a fund of $10,000. Mr. J. W. Semple of Cripple Creek, Colo., donated $1,000 on condition that the hospital raise $9,000 by November 15. Of this, the final $1,000 came from Mr. J. L. Loose of Kansas City.

Visiting Physicians Appointed.—The board of health of Kansas City has appointed the following as the officers of the staff of visiting physicians of the General Hospital: President, Dr. Jabez N. Jackson; vice-presidents, Drs. Jefferson D. Griffith and C. Lester Hall, and secretary, Dr. J. Park Neal.

Resolutions.—The St. Joseph-Buchanan County Medical Society, at its meeting November 11, adopted resolutions urging the establishment of a national health bureau, and the enforcement of local ordinances prohibiting spitting on sidewalks and in public conveyances and the inspection of meat in butcher shops, slaughter houses and packing houses.

NEW YORK.

Harvey Society Lecture.—The fourth Harvey Society lecture, delivered November 28 by Dr. Wilhelm Falta of the University of Vienna, is on "The Therapeutics of Diabetes."

Volunteers Wanted.—The committee on scientific work of the New York State Medical Society is now preparing the program for the coming meeting. Those who wish to read papers are requested to communicate with the chairman, Dr. Leo H. Neuman, 194 State Street, Albany.

Pleads Guilty.—James Doty, indicted at Rochester for illegal practice of medicine under a diploma issued in another's name, is said to have pleaded guilty of practicing medicine without a license, in the Genesee County Court, November 11. The maximum penalty for the offense is one year in the penitentiary and a fine not to exceed $500.

Alumni Election.—At the annual meeting and dinner of the King's County Hospital Alumni Association, held in Brooklyn November 16, Dr. James W. Ingalls was elected president; Dr. George E. Corterno, vice-president, and Dr. Franklin B. Van Wart, secretary-treasurer, and Dr. Victor A. Robertson was re-elected historian, all of Brooklyn.

Personal.—Dr. Joseph Fowler, police surgeon of Buffalo, is reported to be ill at his home.——Dr. Alfred Mercer, Syracuse, said to be the oldest practitioner in central New York, celebrated his eighty-eighth birthday anniversary November 14.——Dr. Hugh McGee, Buffalo, has been appointed national medical examiner of the Postoffice Clerks' Insurance Association.

Academy Incorporates.—The Buffalo Academy of Medicine filed papers of incorporation in the office of the clerk of Erie County November 10. The object of the society is to promote the science of medicine and maintain a medical library and museum. The directors, who also act as the council, are as follows: Drs. Edward A. Bowerman, Harry R. Trick, William Irving Thornton, Grover W. Wende, Thomas F. Dwyer, Charles S. Jewett, Julius Ullman, Thomas J. Walsh, Lawrence Hendee, Thew Wright, Earl P. Lothrop, Edward C. Mann, James A. Gibson, Frederick J. Parmenter and Allen A. Janes.

NORTH CAROLINA.

Communicable Disease Prevalence.—The State Board of Health reports for October that measles was prevalent in 5 counties, whooping cough in 16 counties, scarlet fever in 25 counties, diphtheria in 39 counties, typhoid fever in 59 counties, pneumonia in 18 counties, malarial fever in 17 counties, and smallpox in 3 counties.

Physicians in the Legislature.—Among the 121 members-elect of the legislature are the following physicians: Drs. John A. Pickett, Burlington, Alamance county; Mark B. Pitt, Old Sparta, Edgecombe county; James R. Gordon, Jamestown, Guilford county; Mahlon Bolton, Rich Square, Northampton county; and Robert P. Floyd, Riley, Franklin county.

Personal.—Dr. Mary E. Lapham, Highlands, left November 17, for Davos Platz, Switzerland, for the winter to study the methods in vogue there in the treatment of tuberculosis.——Dr. Walter B. Mott, Mount Mourne, had a cerebral hemorrhage November 13, and is seriously ill.——Dr. Earle Grady, Tryon, who has been seriously ill for two months, is reported to be convalescent.

State Tuberculosis Hospital Opened.—Dr. James E. Brooks, Greensboro, superintendent of the State Hospital for Tuberculosis, announces the opening of the institution, which was authorized by the legislature two years ago, and is located in the Sand Hill section of Cumberland county, eight miles from Aberdeen. Eight patients have thus far been admitted to the institution.

State Antituberculosis Society to Meet.—The annual meeting of the North Carolina State Association for the Prevention of Tuberculosis will be held in Charlotte, Jan. 12, 1909. The convention will be officially opened by the governor; Dr. J. Howell Way, Waynesville, will respond to the address of welcome, and addresses will be made by Drs. Edward L. Trudeau, Saranac Lake, N. Y.; Herman M. Biggs, New York City, and others.

The Polk County Leper.—Secretary Cortelyou in an official statement issued November 7, relative to the case of John R. Early, formerly a soldier in the Philippines, and a citizen of Polk county, who contracted leprosy, which was discovered a few months ago when he was in Washington under orders from the pension department, decides under the recent opinions in the case filed by the attorney general against deportation of Earle to North Carolina or elsewhere from the District of Columbia, where he is at present under guard. Mr. Cortelyou holds that while he has authority to make regulations to prevent the introduction of contagious or infectious diseases into a state or territory or the District of Columbia from any state, he has no authority to make any rule by which Early can be deported from Washington, D. C., or whereby North Carolina can be required to receive him.

Directors Protest.—The directors of the State Hospital, Morganton, at a recent meeting, entered a formal protest against the recent action of the State Hospital Commission in declining to add to the existing plant of the State Hospital for the Insane, Morganton, until the State Hospital for the Insane at Raleigh had been enlarged and made to accommodate as many as the former institution: and furthermore, in ordering all tuberculosis cases in the Raleigh institution to be conveyed to the Morganton institution, which is situated in the mountains. The directors of the latter institution propose to stand on their rights under the law regarding the control of the admittance to the institution under their care and state they will refuse to receive patients ordered from the eastern district by the Hospital Commission, or tubercular insane from outside the limits of Morganton district as prescribed by law.

OHIO.

Will Not Prescribe Liquor.—At a meeting of the Hancock Medical Association, November 17, a resolution was adopted that no member should give a prescription for liquor excepting at the bedside of patients, and then only in case of extreme urgency.

Personal.—Dr. S. A. Hitchcock, Lima, while alighting from a car November 6, fell and fractured his left hip.——Drs. B. S. Perry and Eugene A. Smith, district physicians of Cleveland, have resigned, and Dr. Frank Roth has been appointed Dr. Smith's successor.——Dr. Starling Loving, Columbus, on November 13, celebrated his eighty-first birthday anniversary.

Injunction Against Chiropractic Dissolved.—The Sixth Circuit Court, November 14, is said to have refused to grant the injunction of Dr. Charles H. Merz, Sandusky, acting for the Erie County Medical Society, to enjoin H. L. Murchison, a so-called "chiropractic," from practicing, because he did not have a certificate from the State Board of Medical Examiners. The ground on which the injunction was dissolved was that the property rights of Dr. Merz, who inaugurated the legal contest, had not been interfered with, as claimed in his petition.

Requirements of Ohio Pure Food Law.—The Dairy and Food Commission of Ohio, Columbus, calls attention to the requirements of the Ohio law, which are that milk shall contain not less than 12 per cent. solids and 3 per cent. fats; that milk from which a part of the fats has been removed shall be labeled and sold as skimmed milk; that there is no fixed standard for cream; that condensed milk shall be made from whole milk; that butter shall be made wholly from pure milk products; that renovated or process butter shall be made wholly from pure milk products and shall be labeled and sold as such; that oleomargarine is an imitation of butter, not made wholly from pure milk products and shall be labeled and sold as such, and shall be free from artificial coloring matter; that cream, including cream cheese, Ohio state full cream cheese, or full cream cheese shall be made wholly from pure milk products and shall contain not less than 30 per cent. butter fat; that skimmed cheese shall be made wholly from pure milk or cream and may contain less than 30 per cent. butter fats; that filled cheese is an imitation cheese, not made wholly from pure milk products, and shall be labeled and sold as such; that milk shall not be sold from cows fed on unhealthy feed, from cows fed on wet distillery or starch waste, from diseased or sick cows, from cows kept in a place that is unclean or in an insanitary condition, from cows kept in a cramped or unhealthy condition, when water or other foreign substance has been added, or when it is unclean, impure, unhealthy or unwholesome.

PENNSYLVANIA.

Philadelphia.

Personal.—Dr. Charles W. Dulles, for fifteen years lecturer on medical history in the University of Pennsylvania, has resigned.——Dr. Morris H. Tindall has resigned as medical inspector in the Bureau of Health.——Dr. Benjamin F. Stahl has been elected medical director of St. Agnes Hospital.——Dr. W. Howard Lyle has been appointed a medical inspector in the department of health.

Aid Association Officers Elected.—At the annual meeting of the Aid Association of the Philadelphia County Medical Society, November 9, the following officers were elected: President, Dr. James B. Walker; vice-president, Dr. Jacob R. Shellenberger; secretary, Dr. Lewis H. Adler, Jr.; treasurer, Dr. John B. Turner, and directors for three years, Drs. John B. Roberts, De Forrest Willard and William T. Hamilton.

Cocain Seller Sentenced.—Morris Stein, recently arrested on the charge of selling cocain unlawfully, pleaded guilty in quarter sessions court, November 13, and is said to have been sentenced to two years' imprisonment. Two other persons charged with similar offences were sentenced to six months' imprisonment. The judge, in passing sentence, denounced Stein as worse than a common criminal, and a trafficker in souls.

Extending Medical Organization.—The first step in a more systematic enrollment into the county medical society of physicians as yet unaffiliated with any professional organization, was taken, on suggestion of the committee for increase of membership, by the naming of the following auxiliary committee: Drs. James H. Baldwin, James B. Walker and David Riesman. The so-called "Illinois" plan of a paid organizer is to be investigated.

Academy of Medicine Projected.—Announcement is made of the filing in the county prothonotary's office of the proposed charter of the "Philadelphia Academy of Medicine," a corporation, the object of which is the education and mutual improvement of its members in all matters pertaining to the art of medicine, and by means of lectures, demonstrations and the presentation of papers, the encouragement of study in all departments of medical science.

Public Meeting.—The Philadelphia County Medical Society has decided that, on December 15, it will repeat its successful public meeting of last year. The society recognizes the necessity of the systematic education of the public as to the true status of the medical profession on such subjects as protection of the masses against epidemic diseases, animal experimentation, model laws to guard against criminal and incompetent practitioners and like great sociologic questions. At a recent business meeting of the society $100 was allotted for this purpose, and the following executive committee was named: Drs. Lewis H. Adler, Jr., Alexander R. Craig, Samuel P. Gerhard, Samuel W. Gadd and John J. Gilbride.

Health Report.—The total number of deaths reported for the week ended November 14 aggregated 483, an increase of 62 over the previous week and of 55 over the corresponding week of last year. The principal causes of death were: Typhoid fever, 10; measles, 2; scarlet fever, 8; diphtheria, 13; consumption, 65; cancer, 26; diabetes, 4; apoplexy, 11; heart diseases, 53; arteritis, 8; acute respiratory disease, 48; enteritis, 22; hepatic cirrhosis, 6; appendicitis, 5; Bright's disease, 51; premature birth, 8; congenital debility, 7; senility,

6; suicide, 2; accidents, 21, and marasmus, 4.——There were 215 cases of contagious disease reported, with 32 deaths, or 63 more cases and 9 fewer deaths than were reported in the preceding week.

Tuberculosis Exhibit.—At a meeting of physicians and laymen with Mayor Reyburn, November 9, it was decided to bring the exhibit which was displayed at the International Congress on Tuberculosis to Philadelphia. It was planned to raise $10,000 to secure the exhibit. The mayor was chosen honorary chairman, and the following permanent officers were elected: Chairman, Dr. Joseph F. Neff; secretary, Dr. Joseph Walsh, and treasurer, E. T. Stotesbury. An organization to be known as the Allied Associations for the Prevention of Tuberculosis, and composed of representatives of nearly every hospital and medical organization in the city, was formed, with Dr. Neff as chairman. The following committees were formed: Committee for procuring exhibit from New York, Dr. Lawrence F. Flick, chairman; finance, Mr. John Wanamaker, chairman; hall and arrangements, Dr. Charles J. Hatfield, chairman; publicity, Mr. James Elverson, chairman; committee on lectures, Dr. William W. Keen, chairman, and woman's auxiliary, Miss Mary Richmond, chairman.

New Home for Epileptics Opened.—The Eastern Pennsylvania State Institution for the Feeble Minded and Epileptics, Spring City, was formally opened November 16. Six buildings have been completed at a cost of $250,000. Temporarily the institution will admit only men, but, when the other buildings are completed, women and children will be cared for. Twenty-three buildings are to be erected at a total contemplated cost of more than $1,000,000, and the institution will occupy a site of over 300 acres. The six buildings already constructed comprise a dining hall, accommodating 600 persons, with a kitchen adjoining, a power plant furnishing heat and light and manufacturing ice for the entire institution, an industrial building, provided with work benches and machinery for the inmates, two dormitories capable of accommodating more than 250 patients, and a teachers' home, which will be used as the administration building for the present. Dr. Henry M. Weeks, president of the International Society for Epileptics, has been appointed superintendent, and the following men have been elected to the board of trustees: John P. Crozer, president, Upland; John B. Lober, treasurer, Philadelphia; Samuel A. Whitaker, secretary, Phoenixville; Drs. Wharton Sinkler, Philadelphia; Joseph K. Weaver, Norristown; T. C. Detwiler, Lancaster, and George B. R. Umstead, Phoenixville; Henry W. Comfort, Fallsington, and B. Whitman Dambly, Skippack.

FOREIGN.

Centennial of Medical Instruction in Brazil.—The National Academy of Medicine at Rio de Janeiro celebrated October 3 the hundredth anniversary of the founding of the medical departments in the universities of Rio de Janeiro and Bahia in Brazil. The session was open to the public, with the president of the academy, Prof. A. Nascimento, in the chair. Five gold medals were awarded, one to the president of the republic and one to the minister of the interior, who were both present, the others being given to the deans of the medical faculty at Rio and Bahia. A souvenir volume edited by F. Figueira was also a feature of the celebration. The *Brazil Medico* of October 8 gives the addresses in full.

PARIS LETTER.

(From Our Regular Correspondent.)

PARIS, Nov. 12, 1908.

Disturbances in the School of Medicine at Paris.

As noted in THE JOURNAL at the time (Nov. 30, 1907, xlix, 1853), in consequence of riotous protests by the Paris medical students against the appointment of Professors Nicolas and Prenant of Nancy to fill the chairs of anatomy and histology at Paris, the dean ordered the Paris medical school closed until Dec. 31, 1907. No further trouble was experienced during the remainder of that school year; but, since the end of the summer vacation the rioting of the students of the first and second years has prevented Professor Nicolas from giving his courses. The dean, realizing that by closing the school the previous year he had punished the innocent with the guilty, called on the police, who arrested the rioters and took them before the courts. The measure was, no doubt, rather harsh; but students and pretended students could not be permitted to burn the school furniture, as they did at Professor Nicolas' opening lesson.

Mission for the Study and Prevention of Yellow Fever.

Although the epidemic of yellow fever in Martinique has been actually on the wane since October 31, the Minister of the Colonies has despatched thither a mission for the study and prevention of the disease, under the direction of Dr. Simond, who, in 1902, took part in a similar mission to Rio de Janeiro for the especial purpose of submitting to critical tests the conclusions of the American military commission at Havana in regard to the rôle of the *Stegomyia fasciata* in the transmission of yellow fever. The present mission is to ascertain and apply immediate measures to prevent the spread of the epidemic now raging at Fort de France and sending out infection toward European ports, especially Nantes and St. Nazaire.

Ordinance in Regard to Preserved Foodstuffs.

The Superior Council of Public Hygiene having called attention to the dangers to consumers of preserved foods put up in boxes decorated with lead paints or varnishes, the president of the council of ministers has forbidden the manufacture or sale of boxes of food so painted or varnished. In order to give manufacturers and merchants the time to close out their stocks, the measure will take effect after Aug. 1, 1909. It applies both to imported and domestic commodities; foreign goods coming under the ordinance will be held at the custom-house.

Medicine and Politics.

Two recent incidents have shown the deplorable consequences of the encroachment of politics on the sphere of medicine. A physician in the customs service, having been elected councilor of arrondissement on a platform which was not acceptable to the administration on September 21 received his dismissal from the customs, to date from October 1, on the ground that his political attitude had been judged incompatible with the functions of a physician of the customs. Medical opinion is agreed that this abrupt discharge of a physician from a position which he has held for years constitutes a violation of liberty of opinion altogether unworthy of a republican government. The syndicate of physicians in the neighborhood of the dismissed physician has decided unanimously that none of its members will accept the position.

The other instance is much more serious, for it implicates a physician. During the judicial proceedings in regard to the *émeute* or uprising of Villeneuve-Saint Georges, one of the counsel for the accused found among the documents in the case a letter from a hospital surgeon (who is also physician to the ministry of the interior), giving information against one of his patients as having been concerned in the disturbances. This fact has naturally aroused much feeling. The counsel for the accused are going to address to the Minister of Justice a protest demanding the prosecution of this physician for violation of professional secrecy. Moreover, two physicians have just addressed to the president of the syndicate of physicians of the Seine a letter suggesting that the syndicate notice "this glaring violation of professional secrecy under particularly revolting circumstances" by some severe measure, such as a public reprimand.

BERLIN LETTER.

(From Our Regular Correspondent.)

BERLIN, Nov. 5, 1908.

Campaign Against Tuberculosis.

By a decree of the Prussian Ministry of Education (*Kultus minister*) it has been ordered that apartments which have been vacated by persons suffering from tuberculosis of the lungs or of the larynx shall be disinfected before occupation by a new tenant at the expense of the community or of the district or of some other association prepared to assume the expense (such as insurance companies for sickness, age or invalidism).

Feeding of Poor School Children.

By a resolution of the Berlin Council it is directed that in the coming winter 8,000 poor school children shall receive warm dinners in the soup kitchens. The same privilege is to be extended to children not of school age on the recommendation of charitable societies.

Crusade Against Lupus.

The German central committee for the fight against tuberculosis has lately instituted a systematic campaign against lupus. As a basis of the measures to be taken (foundation of sanatoria for phototherapy, etc.), the number of lupus patients in the various parts of Germany is first to be determined. For this purpose question blanks have been sent out to the German physicians, in which information regarding

the number, sex and age of the patients, as well as regarding the disease, is asked for. These circulars will be collected by the government officials and statistical tables worked out from them.

Health and Recreation Resorts for Children

According to a report of the director of the public charities in Hamburg, there existed in Germany in 1906 the following institutions for children: 41 sanatoria in salt water bathing resorts, with 4,472 beds; 22 seashore sanatoria, with 2,164 beds; 28 sanatoria in health resorts, with 1,304 beds; 6 sanatoria for pulmonary patients, exclusively children, and 10 sanatoria for pulmonary patients in which children are also received, which together provide 283 beds. In addition there were the so-called vacation colonies, in which children needing recuperation are cared for during the summer vacation; nineteen forest recreation stations, etc. All together 66,299 children were cared for in 1906 in all these sanatoria and convalescent stations.

VIENNA LETTER.

(From Our Regular Correspondent.)

VIENNA, Nov. 8, 1908.

Appointment of a New Professor of Anatomy.

The post of director of the anatomic museum and lecturer on human anatomy at the University of Vienna, made vacant by the resignation of Hofrat Toldt, who wishes to finish his life work, the "Anatomic Atlas," has been offered to Prof. S. Hochstetter, who has been assistant to Toldt, Langer and Zuckerkandl, and is well known by his researches on the phylogenetic development of the heart and blood vessels.

Increase in Height and Improvement of Physique in Austria.

The recently published reports for 1908 of the army recruiting officers contrast remarkably with those of former years in respect to the number rejected and the average health and physique of the recruits. Every male Austrian subject must present himself three times, between his twenty-first and twenty-fourth years, unless previously finally rejected, for compulsory military service. The requirements were not severe: a minimum height of 155 cm. (5 feet) and a minimum chest measurement of 83 cm. (33 inches). In former years 30 per cent. had to be rejected. Since 1903 a constant improvement in nearly all respects has been observed. The number of myopic, hypermetropic, underfed and crippled youths has diminished until this year not less than 90 per cent. could be pronounced fit. Of those rejected, 60 per cent. came from the rural districts and 40 per cent. from the towns; the grounds of rejection were bad hearing, bad physique and bodily malformation. It is interesting to note that in 1899 the physical requirements for recruits had to be lowered in respect to eyesight and hearing. It is now at least 4 diopters for myopic, 2 diopters for hypermetropic, with 6/12 visual acuity with correcting glasses; hearing in both ears for the whispered voice at not less than three feet, and for the conversational voice at not less than twelve feet. The average height of the Austrian recruit this year is 167 cm. (5 feet 5 inches), an increase of 3 cm. in ten years. The reasons for the improvement of the national physique are not clear, for the improvement in general health and standards of life has not been such as to account for it.

New Hospital with One Thousand Beds.

To celebrate the sixtieth anniversary of the emperor's reign, the municipality of Vienna has decided to found several charitable institutions. One is a hospital with over 1,000 beds; its corner-stone has been laid by the emperor. There will be a surgical ward with 150 beds, two wards for internal diseases with 150 beds each, 150 beds for the open-air treatment of phthisical patients, and the remaining 400 beds will be devoted to gynecologic, otologic, ophthalmic and laryngologic cases. There will also be attached to the hospital a pavilion with 150 beds for paying patients, making 1,150 beds in all. The institution will comprise 19 pavilions, including the necessary laboratories, a library and a pathologic institute. The cost is estimated at about $2,250,000, in addition to the value of the site, which is already owned by the city. At the same time, 5 pavilions, with 120 beds each, will be added to the existing children's hospital as "Emperor's Jubilee Pavilions," so that over 1,700 hospital beds will be added to the existing number in a year's time. It is to be hoped that this addition will be sufficient to do away with the abominable condition now justly complained of, the lack of space being such that dying patients could not be brought into the hospital.

Pharmacology

"Distinguished Turpitude."

"Our friends the medicine men seem to be perking up a bit of late. Orangeine is advertising that it cures headaches, cold, grippe, and indigestion by 'removing the cause.' It 'cures' these things on the same principle that by hitting a man on the brain with a club you may 'cure' his headache until his consciousness revives. Antikamnia also shows signs of making claims as false as those made before the exposures; and some, in spite of their evil, are positively diverting, thus:

"PRACTICAL PRESCRIPTIONS

"ALCOHOLISM—(After Debauch) Antikamnia & Codein Tablets. "Dose:—One every two hours. Teaspoonful Tr. Gentian Comp. three times daily in water."

"Among the other diseases thus prescribed for are ague, asthma, backache, biliousness, 'car sickness,' catarrh (defined as or recognized by 'pain in head'), 'change of climate,' 'chest pains,' colds ('to stop quickly') consumption ('chest pains'!) delirium tremens, delirium from fever, drunkenness, epilepsy, intermittent and remittent fever, hay fever, hiccough, hysteria, locomotor ataxia, 'threatened pneumonia,' sciatica, seasickness, 'shopper's headache,' St. Vitus' dance, toothache, whooping-cough, and 'worry'! Verily, the supply of suckers is forever inexhaustible, and the 'patent-medicine' bunco game will, doubtless, pick up as the public forgets the information which it recently acquired."

The above is from *Collier's Weekly*. Orangeine and Antikamnia—Antikamnia and Orangeine! Has it come to the pass that mere laymen shall class the great "ethical proprietary" Antikamnia with the plebeian "patent medicine" Orangeine? Banish the thought! And yet, who knows; possibly within the year we may see in the street-cars and elevated trains, sandwiched between posters describing Shac and Orangeine, advertisements extolling the virtues of Antikamnia. One pictures the homeward-bound suburbanite, clinging wearily to a strap in an overcrowded street-car, with the ferrule of a fellow-passenger's umbrella intermittently gouging his intercostal muscles and an obese female standing stolidly on one of his feet. What would be the psychic effect on such an individual of having to face an advertisement which read:

FEELING IS A SENSE.
FEELING PAIN
NONSENSE.
TRY TWO ANTIKAMNIA TABLETS.

In the language of the immortal Hashimura Togo, "We enquire to know."

Elegant Specialties.

Practically all manufacturing pharmaceutical houses put out more or less—usually more—"ethical proprietaries" for the use of doctors who do not have time to formulate and write individual prescriptions for individual patients. While most of these preparations would be more correctly classed as nostrums, they are always labeled "specialties" in the price lists of the manufacturers.

In the price list of Stearns and White Co., Chicago, the description of one of their "specialties" reads:

> "Sulphozone.—This product is a compound and somewhat complex assimilation of natural gases acted on by Sulphur Dioxid in an aqueous solution, producing other gases of oxygen in reaction."

Evidently this is intended as a succedaneum for the late liquozone.

The composition of another "specialty" is thus given:

> "Modernopolt.—The body proper of this most excellent product is a clay formation of the Silician age—to which is added in suitable quantities Boric Acid

and Methyl Salicylate thoroughly incorporated in pure Glycerin and augmented by the valuable action of Camphophenique."

In the elegant and classic language of the editor of the *California State Journal of Medicine*, "Ain't it rotten, Rosie?"

Pharmacists and Postgraduate Courses.

Physicians have already demonstrated the value of well-organized local postgraduate courses and are extending and elaborating such work. That similar courses adapted to the profession of pharmacy would prove of value has been recognized by the Philadelphia branch of the American Pharmaceutical Association. The members of this body recently attended the first of a series of free lectures and demonstrations in the Postgraduate Course of Instruction for Local Pharmacists. The topic was "The Application of the Microscope in Pharmaceutical Practice," which was presented in detail by Professor Henry Kraemer. These lectures offer a valuable and unique opportunity to those pharmacists who are interested in the professional side of their work, and the Philadelphia pharmacists are to be commended on the progressive step they have taken. It is to be hoped that this work may be extended all over the country, and become a permanent feature in local pharmaceutical societies. It is needed.

Correspondence

A Plea for Esperanto in International Medicine.

LEWIS, Kan., Nov. 16, 1908.

To the Editor: I wish to answer your Paris correspondent's question in THE JOURNAL, Oct. 10, 1908. Speaking of the advantages accruing from the use of only one language in international medical congresses, he says: "The ideal, however, would evidently be to adopt for communications and for discussions a single language, as has been done for international relations. Some believe that only a new, artificially created language, such as Esperanto, is capable of answering the requirements; but is it not chimerical to think of adopting an artificial language when it would be much simpler to use a living one?" Then he goes on to urge the use of French.

Certainly, one can not deny that one language only would be the ideal—not only for medical, but for all international relations—but with the correspondent's conclusion as to French and Esperanto, many will take issue, even many who are not partisans of the latter. It is strange that any one living in this age of invention, using daily the railway, telephone, automobile, and the thousand other artificial improvements, should object to an artificial language. In our utilitarian world the only questions that should be considered in selecting a tongue for international use are:

1. Does it answer all requirements of communication as well as or better than any other?

2. How does it compare with others in difficulty of acquirement?

3. What are the relative obstacles in the way of its adoption by all nations?

I submit that the only language that satisfactorily fulfils the above demands is Esperanto, because:

1. Four great international world congresses have fully shown that Esperanto is adequate to express ideas of every character. Technical terms already used internationally are changed only enough to make them conform to the Esperanto endings. Medical writers will find that Esperanto will convey as clearly as German all shades of meaning.

2. That Esperanto is more easily learned than any other modern language is due to the fact that the obstacles met with in most modern languages do not exist in the new tongue: (a) The spelling is absolutely phonetic and deals with elementary sounds easily acquired by any one, no matter what his native language. Experience has shown that people of all nationalities pronounce this language with the least residual native accent. (b) There are no exceptions to any grammatical rule and only 16 rules! (c) There are no irregularities of word formation, and the inflections for person, number, case, tense, etc., are reduced to a minimum. (d) There are few synonyms and no words with the same sound and different meanings, except as the unforeseen results of word building. (e) It is more widely international in its elements than any other tongue. (f) It has a system of word building which renders it one of the most flexible mediums in the world for exact and varied expression, and at the same time does away with five-sixths of the vocabulary ordinarily to be memorized by the student of a new language.

3. Having no race prejudices or national jealousies to combat, as any national tongue will always have, Esperanto has a great advantage in the race for international preferment.

I have learned more Esperanto in eleven months (since I first took it up from reading the note in THE JOURNAL, Nov. 30, 1907) in the odd moments of a busy practice than I have been able to learn of French and German since I began their study in college in 1893. In the brief period named I have learned to read Esperanto readily without dictionary, to write it easily and to speak it slowly. That is many times as well as I have done with either of the other languages. Frankly, I doubt if I ever could master the French pronunciation or the German gender and construction. And a lot of smarter people than I am are in the same fix.

ELMER E. HAYNES, M.D.

Instruction on Medical Ethics.

NEW YORK, Nov. 16, 1908.

To the Editor: I am repeating this season the course of instruction in the Principles of Medical Ethics, which was received with enthusiasm by the members of the graduating class last year. Only two or three sections of the booklet are considered at one time, and this after the completion of a lengthy conference on practical surgical topics. The same enthusiastic interest is displayed now by the students that characterized the last year's course. The students are anxious, indeed, for copies of the Principles of Medical Ethics, so that they may be able to follow the instructions with greater advantage to themselves, for obvious reasons. I, therefore, request that you will send me for use a copy for each member of the graduating class. It is much better to place them thus early in hand than to wait until after graduation. This course of action is so obvious as to need no further remark. As soon as suitable progress is made in this manner I will again request of the students individual queries bearing on medical ethics which may occur to them to make. No doubt the illuminating experience in this regard which developed further need for this deviation in the manner of instruction last term will be equally manifest again. I hope that all other institutions engaged in medical instruction will see the need of this ennobling activity and accordingly enter on it. It is far better, it seems to me, to start aright in this field of professional adornment, with early success, than later to labor harder with a comparatively disappointing outcome. In any event, I am anxious that the medical man graduating from the college which I have the honor to represent shall be afforded the opportunity to become as gracious and just in manner and method as he is equipped in professional attainments.

JOSEPH D. BRYANT.

[COMMENT: The above is published because it comes from one who has had experience in discussing, before senior medical students, the philosophy of ethics as it relates to medicine and because it gives us opportunity to call the matter to the attention of those in other medical colleges who are interested in the subject. As heretofore, the American Medical Association stands ready to supply, without charge, to the authorities of every medical school, a sufficient number of copies of the Principles of Medical Ethics so that one may be placed in the hands of each senior student. We have usually sent out these copies in February, but we think an earlier distribution, as suggested by Dr. Bryant, is an improvement. Authorities of medical schools may therefore apply at once for the number desired. It is hoped, however, that something more will be done than merely to distribute booklets. No medical college should allow its graduates to enter on their life work unless

they have received at least one lecture on ethics as it relates to medicine and to medical conduct. In this connection we call attention to an editorial in this issue.—ED.]

A Literary Description of the Psychic Phases of Tuberculosis.

CHICAGO HEIGHTS, ILL., Nov. 10, 1908.

To the Editor:—The remarkable paragraph by Charles Dickens which I enclose occurs in "Nicholas Nickleby," forty-ninth chapter, third paragraph. It seems to be noteworthy, not only on account of the beautiful use of language, but also as a description which leaves little doubt as to the nature of the disease.

"There is a dread disease which so prepares its victim, as it were, for death; which so refines it of its grosser aspect, and throws around familiar looks unearthly indications of the coming change—a dread disease, in which the struggle between soul and body is so gradual, quiet, and solemn, and the result so sure, that day by day, and grain by grain, the mortal part wastes and withers away, so that the spirit grows light and sanguine with its lightening load, and, feeling immortality at hand, deems it but a new term of mortal life—a disease in which death and life are so strangely blended, that death takes the glow and hue of life, and life the gaunt and grisly form of death—a disease which medicine never cured, wealth warded off, or poverty could boast exemption from—which sometimes moves in giant strides, and sometimes at a tardy sluggish pace, but, slow or quick, is ever sure and certain."

E. M. BARNES.

Medical Economics

A GENERAL PLAN FOR A SCHEDULE OF MEDICAL FEES.

By J. N. McCormack, M.D.

BOWLING GREEN, KY.

I have long held the opinion that it was feasible to frame a plan for a schedule of medical fees which could easily be modified, as to the amount of the charges and other details, to meet the conditions and needs of almost any county or locality in any section of the country. As the plan I have in mind would be for the information, guidance and benefit of the public quite as much as of the profession, it involves conferences and a full understanding with the people of the community beforehand, as well as the fullest possible publicity afterward, through the public press, placards in each office, and otherwise, the explanatory footnote being made an essential part of every publication.

One of the main difficulties about this in the past has been the almost universal, but wholly erroneous, opinion and insistence on the part of both profession and laity that all the physicians of a community have an equal value and should make the same charge for their services. We know full well, and in a way and to an extent that the people can not, that nothing could be further from the truth. Because of the faulty system of medical education, loose medical laws, and lack of local organization and incentives to study, in vogue in this country until recent years, there are regularly licensed physicians in almost every community in the United States, in cities and towns quite as abundantly as in the country districts, who are well paid for all they know or can do for their patrons when they receive anything, and I insist that the time has come for us to deal frankly and openly with each other and the public about this and all other matters of common interest. It is essential to the success of such a plan, too, that we abandon once and forever the antiquated notion of penalties for those who do not live up to the schedule, or blacklists for those who do not pay for services. Such harsh methods are contrary to the spirit and purposes of real organization and, in the very nature of things, can only be productive of misunderstandings and odium.

I have made rate-cutting and cheap doctors a matter of special study in every section of the country for years, and have come to have much sympathy for this class. On getting down to bottom facts, I have always found that they charged less for their services because they honestly knew, better than any one else did or could, that they were worth less than their competitors, and that this was their only chance to obtain or hold practice. There may be exceptions to this, but I have never found one that would bear investigation. They have my sympathy for another reason. As with the division of fees and commissions, contract and lodge practice, the use of proprietaries and nostrums, and similar mistaken practices and policies, all more hurtful to the people than to the profession, the fault is far more with the schools which pretended to educate these men than with them. In fact, without proper instruction about these matters during student life, so as to make it a part of their very being, just as important to the future physician and his patrons as instruction in anatomy or physiology, and sometimes with bad examples from their teachers to start them in the wrong direction, the wonder is that more of them do not do worse. These are just the men who most need the uplifting influences of county societies and postgraduate courses, they are actual entities with which we must live, associate or contend, and with tact and judgment many of them can be made competent. To suspend or expel them is far more of a punishment to their innocent patrons than to them, and it destroys the only chance of reclaiming them.

What is first and most needed in dealing with this class, for their own good as well as of the people, is to raise their earning capacity, to make them better practitioners and better men, by means of consistext, persistent postgraduate study, and by the influence and example of the higher grade members, in every county society and in such intercourse as comes in daily practice, and then in leading them to the adoption of systematic business methods and aiding them in other ways in securing better compensation. If we could substitute common sense plans of cooperation, the idea of a real community of interests, of practical, kindly helpfulness, such as is common between lawyers, in the place of the habit of fault-finding, jealousy and aloofness which is still as easy to find as it is disgraceful between the physicians of many communities, the difficulties of this entire problem would be reduced to a minimum.

The county societies and postgraduate courses furnish the facilities for doing the scientific and social features of this work. For the business side of it I am advising that the profession in each county or city consider the advisability of arranging for systematic monthly collections, with a carefully selected business representative, and a centrally located "medical collector's office," the collector to be under bond, and on a definite salary, and with authority to appoint as many assistants as may be necessary, for whom he is responsible, very much as sheriffs and city collectors do. The collector should be a man of tact and judgment, he should hold the affairs of each physician as strictly private and confidential, and he should be well paid. This plan should not be tried anywhere until good scientific work is well under way and a spirit of harmony secured, until all of the details have been worked out with the kind of business representatives indicated, and until public sentiment is prepared for it. Even in large cities the plan is worthy of consideration for colony and office buildings, wards or other convenient groups, if it can not be made available for the entire profession. It will not be easy to do these things in any community, in fact, it is never easy to do any important reform work which is worth doing, but with such preparatory work as has been suggested, and with tact and judgment in the earlier steps, I am convinced that the plan could be made as pleasant and convenient for the people as it would be helpful and profitable to the profession.

In most parts of the northwest and on the Pacific Coast the rate of charges sanctioned by custom is sufficient to sustain a competent and equipped profession, but in many sections of the eastern, middle and southern states, outside the large centers of population, and for a large part of the profession in them, all except the surgical fees are wholly inadequate, and this is operating to the disadvantage of both the profession and people now in a way unknown to our forbears. This country in recent years has passed through an era of most remarkable prosperity, but physicians and other professional classes have

not shared in it. With the cost of living almost doubled, and the cost of equipment for modern practice quadrupled, the income of medical men, except surgeons and specialists, has remained about stationary. Properly interpreted, poverty in the profession, and the lack of equipment and practical incompetency inseparable from it, is just as important to the public as to us, and the subject should be boldly discussed in public meetings and in the periodical and daily press until this real, positive danger to the people is a matter of common knowledge. Not only the higher standard of competency, but the increased usefulness of the profession in other ways should be made plain. It now probably does more real charity than all the other vocations combined, but the generous support to which it is entitled, and which is demanded by the highest humanitarian interests, would enable it to do a systematic, intelligent, discriminating relief work which is now impossible. To an extent not dreamed of by the laity, or even by many in the higher ranks of the profession, a large per cent. of the physicians in this country, in cities and towns as well as in the rural districts, on account of poverty and the pressing needs of their own families, are daily forced to take what is almost blood-money from a class of widows, teachers and working-women, in their times of affliction, whose incomes are so scanty when well, that it would and should be an honor and a pleasure to make them the special wards and beneficiaries of a properly supported profession.

The opportunity has come to me to study this whole question as no other man probably has ever been able to do. I am giving the results of this broad experience in my public talks every evening, and find, in the lay discussion which follows, that the people can be made to appreciate our difficulties and their dangers quite as readily as can the profession. In truth, unpleasant as is the admission, the trouble is with us and not with the public, as is true in regard to almost every other evil from which we suffer. If the physicians competing for the same practice in every section of the United States could really get together in all these matters, and then take the people into their confidence, the balance would be comparatively easy, as there are not enough of them to do the practice if every patient was given the time, and the kind of scientific examination and treatment, to which they are entitled.

For many reasons, any schedule intended for general adoption should cover only the ordinary fees for general practitioners and non-operative office work. Surgical fees are usually the subject of special arrangement, and, anyway, they vary to such an extent that an attempt to include them would give the public an exaggerated and misleading notion of what is received by the ordinary surgeon, or by any of them except under extraordinary circumstances, and would do more harm than good. As a rule, too, surgeons and specialists are better paid and are well able to take care of themselves. Besides, my experience has convinced me that it is in the field of general and office practice, with the hard-worked and underpaid ordinary practitioners, that the pressing need for reform exists.

For obvious reasons the schedule should be adopted by the profession as a whole, or as individuals, and not by the county society. The provision in the by-laws forbidding such action by the societies was inserted after careful consideration, was certainly wise under the conditions then and still existing, and probably should be permanently retained. The membership in most societies embraces only about from one-half to three-fourths of the physicians of the county. While it is probable that all, including the former sectarians, will finally come in, this will be the work of years, and although not absolutely essential, it is important that the schedule be agreed to practically by all of the active physicians of the jurisdiction, whether members or not. Besides, this has been one of the most fruitful sources of discord in societies in the past, often provoked by those who took least interest in the scientific proceedings.

With all the foregoing considerations in mind, and after the matter has been fully discussed with the people, the schedule and footnote, in their main features, are suggested only as the basis for discussion. The rate of charges will seem too high for some sections and entirely too low for others. I am proposing about what, in my judgment, would be fair and equitable at the present cost of living and equipment in the central, middle, western and southern states, but, of course, the exact fees and other details must be arranged for each community in accordance with what is deemed just and proper. The rates should not be too hard and fixed. There are people of moderate circumstances in almost every community, factory operatives and others, who ought to pay something, and yet should not pay full fees, and a wise discretion on this and similar points must be provided for in any plan which is to be comprehensive and successful.

The order of arrangement and the items of practice included are as seems best suited for most counties and communities, but the purpose is to make it so simple and flexible that it can be altered to suit varying conditions and views. For instance, if it is thought best, fees for fractures and dislocations, or any other surgical or special work, can be easily added. It will be noted that a broad distinction is made between ordinary and complete office examinations, including a thorough examination of the chest, urinalysis and other like work involving extra time and skill. My own opinion is that a double charge should be made for night practice for well-to-do people, but I have yielded to the views of others on this point. Telephone practice is so annoying, exacting and unsatisfactory that it certainly should be paid for except where regular visits are being made, and in all cases after bed-time. Consultations are purposely made low in order to develop and encourage this variety of practice.

The form of schedule suggested and the footnote, as they should go on the placard, are as follows:

SCHEDULE OF MEDICAL FEES FOR ———— COUNTY.

1. Day visit in town	$2.00
2. Night visit in town	3.00
3. Day visit in country, first mile, $2.00; each after mile, one way	1.00
4. Night visit in country, first mile, $3.00; each after mile, one way	1.50
5. Ordinary office examination and advice	1.00
6. Complete examination and advice	5.00
7. Advice or prescription by telephone	1.00
8. Obstetric case, uncomplicated, not over 6 hours	15.00
9. Life insurance examinations	5.00
10. Consultation, double ordinary visit.	
11. Surgical and other special fees as may be arranged.	

EXPLANATORY NOTE.

This schedule of fees is purely advisory. It is arranged and published for the information and guidance equally of the profession and people. It is intended to suggest the fees for ordinary services by competent physicians, for these fully able to pay their bills. It in no way applies to practice for the deserving poor, of which all agree to do their full part. It may be that physicians who are less competent will feel that they should charge less for their services. This is recognized as just, and to do so will in no way affect either their society membership or professional standing. It is especially important that these less fortunate members should have the benefit of the postgraduate study courses and other scientific work of the county society, which are free to all, for their own good as well as that of their patrons, and regular attendance at these meetings should be made a condition of continued employment. Night fees are made higher for many reasons, but more especially to give time for such study and society work as is essential in keeping a physician competent to practice with safety to the people.

For the convenience and benefit of both the profession and its patrons, systematic monthly collections, in so far as possible, are requested in the future. It is believed that it will be more satisfactory to families to settle their accounts while they are small, and while they remember and are grateful for the services, and it will enable physicians to keep equipped for far better service.

POSTGRADUATE COURSE FOR COUNTY SOCIETIES.

DR. JOHN H. BLACKBURN, DIRECTOR.
BOWLING GREEN, KENTUCKY.

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

Fourth Month: Third Weekly Meeting.

DISLOCATIONS.

CLASSIFICATION.—Compound, complicated, multiple, complete and incomplete, traumatic, pathologic, congenital, ancient or unreduced, recurrent, spontaneous.

ETIOLOGY.—Predisposing causes, anatomic peculiarities, age, sex, occupation; exciting causes, indirect or direct violence, muscular action.

PATHOLOGY.—Injury to ligaments and capsule, injury to bone and cartilage, to blood vessels, to nerves.

TREATMENT.—Anesthetic, reduction; obstacles to reduction, portions of capsule, muscle, tendon, bone.

SPECIAL DISLOCATIONS.

LOWER JAW.—Varieties, treatment.

CLAVICLE.—1. Sternal end: (a) forward, (b) upward, (c) backward. 2. Acromial end: (a) supra-acromial, (b) subacromial, (c) subcoracoid. Diagnosis and prognosis in each variety.

SHOULDER.—Frequency, age, sex, character of injury. Pathologic anatomy. 1. Anterior or forward; (a) subcoracoid, (b) subclavicular. 2. Downward; subglenoid, with subvariety, the erect. 3. Posterior or backward: (a) subacromial, (b) subspinous. 4. Upward; supraglenoid. Diagnosis; (a) subcoracoid, inspection, palpation, abduction; Dugas' test. (b) Subclavicular. (c) Subglenoid, inspection, palpation, abduction, measurements. (d) Subspinous and subacromial. Diagnosis of complications. (a) Fracture of humerus. (b) Injury of vessels and nerves.

ELBOW.—1. Of both bones of forearm: (a) Backward (backward and outward or backward and inward). Pathology, lateral ligaments, flexors and brachialis anticus, coronoid process; fractures and injuries to vessels and nerves. Diagnosis and treatment. (b) Lateral (incomplete inward and outward, or complete outward). (c) Forward (with or without fracture of olecranon). (d) Divergent (anteroposterior and transverse). 2. Of ulna alone (backward and upward). 3. Of radius alone (forward, backward and outward). 4. Unreduced dislocations of elbow. Due to interposed capsule. 5. Unreduced dislocations of elbow. Due to interposed capsule, muscle or bone. Treatment, arthrotomy.

WRIST.—1. Lower Radio-ulnar Joint. 2. Radio-carpal Joint. (a) Dorsal, backward dislocation. (b) Forward dislocation. 3. Carpal Bones. (a) Mediocarpal joint. (b) Isolated displacement. 4. Carpometacarpal Joints.

PHALANGES.—1. Metacarpo-phalangeal Joints. (a) Thumb. Pathology and treatment. (b) Fingers. 2. Interphalangeal Joints of Fingers.

The Public Service

Army Changes.

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ending Nov. 21, 1908:

Geddings, E. G., and Quinton, W. W., capts., ordered to report at Washington, D. C., for examination for promotion.

Cox, Walter, and Bispham, W. N., capts., ordered to report at Manila, P. I., for examination for promotion.

Persons, E. E., capt., relieved from duty in Philippines Division; will sail Dec. 15, 1908, from Manila for San Francisco.

Worthington, J. A., first lieut., relieved from duty at General Hospital, Presidio of San Francisco, and assigned to duty as surgeon of transport *Crook*.

Pinkston, Omar W., first lieut., relieved from duty as surgeon of transport *Crook*.

Bloombergh, H. D., capt., relieved from duty at Fort Leavenworth, Kans., and ordered to San Francisco, to sail Jan. 5, 1909, for Manila, for Philippine service.

Purnell, H. L., capt., relieved from duty at Fort Mackenzie, Wyo., and ordered to San Francisco, for duty as surgeon of the transport *Thomas* on its next voyage; on arrival at Manila, to report for duty in Philippines Division.

Reasoner, M. A., first lieut., relieved from duty as surgeon of transport *Thomas*.

Jones, H. W., first lieut., relieved from duty as surgeon of transport *Buford* about Jan. 15, 1909, and ordered to the United States.

Harvey, P. F., col., left Chicago on leave of absence.

Ragan, C. A., capt., left Ft. Monroe, Va., on leave of absence for 10 days.

Appel, D. M., lieut.-col., granted leave of absence for 30 days.

Lemmon, R., M.R.C., granted an extension of 15 days to his leave of absence.

Guittard, A. M., M.R.C., ordered to active duty, and directed to proceed to Fort Logan, Colo., for duty.

Escobar, Julius A., M.R.C., fell into open well at Imus, Cavite, P. I., Nov. 15, 1908, and was drowned.

Slayter, John T. H., M.R.C., honorably discharged from the service of the U. S.

Dougherty, James C., M.R.C., ordered to active duty at the expiration of his present leave of absence.

Murray, Wilson, M.R.C., ordered to active duty at the expiration of his present leave of absence, and directed to proceed to Fort William Henry Harrison, Mont., for duty.

Tignor, Edwin P., dental surgeon, ordered to Forts Howard and McHenry, Md., successively, for temporary duty.

Montgomery, W. O., and Mansfield, T. O., contract surgeon, contracts annulled, their services being no longer required.

Navy Changes.

Changes in the medical corps, U. S. Navy, for the week ending Nov. 21, 1908:

Dessez, P. T., P. A. surgeon, orders to the Pacific fleet modified; ordered to temporary duty at the Naval Hospital, Mare Island, Cal.

Anderson, F., medical inspector, detached from the Navy Yard, Mare Island, Cal., and ordered to command the Naval Hospital, Annapolis, Md.

Lowndes, C. H. T., surgeon, ordered to the Navy Yard, Mare Island, Cal., and to additional duty, in command of the Naval Medical Supply Depot at that place.

Vickery, E. A., P. A. surgeon, detached from the Naval Hospital, Annapolis, Md., and ordered to the Naval Hospital, Boston.

Fauntleroy, A. M., P. A. surgeon, detached from duty at the Naval Medical School Hospital, Washington, D. C., and ordered to duty at the Naval Hospital, Annapolis, Md.

Hayes, G. M., P. A. surgeon, unexpired portion of sick leave revoked; ordered to the Naval Recruiting Station, Baltimore.

Brooks, F. H., asst.-surgeon, detached from the Naval Hospital, Boston, Mass., and ordered to the Naval Recruiting Station, Cleveland, Ohio.

Munson, F. M., P. A. surgeon, detached from the First Torpedo Flotilla on board the *Decatur*, and ordered to treatment at the Naval Hospital, Canacao, P. I.

Kelly, H. L., asst.-surgeon, detached from the Naval Station, Cavite, P. I., and ordered to the *Decatur* for duty with the First Torpedo Flotilla.

Public Health and Marine-Hospital Service.

List of changes of stations and duties of commissioned and other officers of the Public Health and Marine-Hospital Service for the seven days ended Nov. 18, 1908:

Kerr, J. W., asst.-surgeon-general, detailed to represent the service at the Convention of Mayors of North Carolina at Charlotte, N. C., Nov. 17-18, 1908.

White, J. H., surgeon, granted 8 days' leave of absence en route to join station.

Cumming, H. S., P. A. surgeon, granted 1 month's leave of absence from Oct. 29, 1908.

Billings, W. C., P. A. surgeon, detailed as a member of a revenue cutter service retiring board at Baltimore, Md., Nov. 18, 1908.

Francis, Edward, P. A. surgeon, granted 10 days' leave of absence from Dec. 1, 1908.

Burkhalter, J. T., P. A. surgeon, detailed as a member of a revenue cutter service retiring board at Baltimore, Md., Nov. 18, 1908.

Porter, Joseph Y., sanitary inspector, title changed to read "quarantine inspector," from Dec. 1, 1908.

Barnes, W., acting asst.-surgeon, granted 21 days' leave of absence from Dec. 10, 1908.

Blanchard, J. F., acting asst.-surgeon, granted 2 days' leave of absence from Nov. 11, 1908.

Browne, R. W., acting asst.-surgeon, granted 29 days' leave of absence from Nov. 20, 1908.

Carter, P. I., acting asst.-surgeon, granted 5 days' leave of absence from Nov. 2, 1908.

Curley, C. P., acting asst.-surgeon, granted 3 days' leave of absence from Nov. 18, 1908, under Paragraph 210, Service Regulations.

Dynan, N. J., acting asst.-surgeon, granted 1 day's extension of leave of absence on account of sickness, Nov. 4, 1908.

Lyall, Robert, acting asst.-surgeon, granted 4 days' leave of absence from Nov. 6, 1908, without pay.

Marcoe, W. W., acting asst.-surgeon, granted 30 days' leave of absence from Dec. 2, 1908.

Stearns, H. H., acting asst.-surgeon, granted 28 days' leave of absence from Dec. 4, 1908.

Thompson, W. R. P., acting asst.-surgeon, granted 30 days' leave of absence from Nov. 23, 1908, 9 days with pay, and 23 days without pay.

BOARD CONVENED.

Board of medical officers convened to meet at the bureau, Nov. 23, 1908, for the purpose of making final revision of the regulations for the medical examination of arriving aliens. Assistant-Surgeon General H. D. Geddings, chairman; Surgeon George W. Stoner, Passed Assistant Surgeon J. W. Schereschewsky, Acting Assistant Surgeon, M. V. Safford, recorder.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended Nov. 20, 1908:

SMALLPOX—UNITED STATES.

Arkansas: Sulphur Rock, Aug. 25-Nov. 9, 14 cases.
California: Cedarville, July 18-Nov. 6, 5 cases; San Francisco, Oct. 18-31, 19 cases.
District of Columbia: Washington, Oct. 24-31, 7 cases.
Illinois: Springfield, Oct. 22-29, 2 cases.
Indiana: Elkhart, Oct. 24-31, 3 cases; Lafayette, Oct. 26-Nov. 2, 4 cases; Terre Haute, Oct. 31-Nov. 7, 1 case.
Kansas: Topeka, Oct. 13-24, 1 case.
Kentucky: Covington, Oct. 24-Nov. 7, 2 cases.
Maine: Canadian Border, Nov. 8, 12 cases.
Montana: Butte, Oct. 20-27, 4 cases.
Ohio: Cincinnati, Oct. 23-30, 1 case.
Tennessee: Nashville, Oct. 24-31, 1 case; Stanton and vicinity, Sept. 10-Nov. 9, 21 cases.

Washington: Spokane, Oct. 24-31, 3 cases; Tacoma, Oct. 18-25, 1 case.
Washington: Spokane, e. 9mfwyp amfwy amfwy acmfwyp
Wisconsin: Manitowoc, Oct. 24-31, 2 cases.

SMALLPOX—INSULAR.

Philippine Islands: Manila, Sept. 19-Oct. 3, 5 cases, 1 death.

SMALLPOX—FOREIGN.

Arabia: Aden, Oct. 12-19, 15 deaths.
Ceylon: Colombo, Sept. 19-Oct. 3, 38 cases, 10 deaths.
India: Bombay, Oct. 6-13, 2 deaths; Calcutta, Sept. 12-26, 4 deaths.
Indo-China: Saigon, Sept. 19-26, 2 cases.
Italy: General, Oct. 23-29, 14 cases; Naples, Oct. 17-24, 4 cases.
Mexico: Veracruz, Oct. 24, 1 case.
Peru: Lima, Oct. 19, 8 in lazaretto.
Russia: Moscow, Oct. 10-17, 9 cases, 2 deaths; St. Petersburg, Sept. 26-Oct. 10, 14 cases, 4 deaths.
Spain: Valencia, Oct. 17-24, 2 cases; Vigo, 1 death.
Zanzibar: Zanzibar, Sept. 14-21, 1 death.

YELLOW FEVER.

Brazil: Manaos, Sept. 26-Oct. 3, 2 deaths.
Ecuador: Guayaquil, Oct. 3-10, 1 death.
Mexico, Veracruz, Oct. 27, 1 case.

CHOLERA—INSULAR.

Philippine Islands: Manila, Sept. 19-26, 314 cases, 184 deaths; Sept. 26-Oct. 3, 67 cases, 33 deaths; Provinces, Sept. 19-26, 1,122 cases, 745 deaths; Sept. 26-Oct. 3, 1,666 cases, 977 deaths.

CHOLERA—FOREIGN.

Ceylon: Colombo, Sept. 19-26, 2 cases.
China: Shanghai, Oct. 13, present.
India: Calcutta, Sept. 12-26, 13 deaths; Rangoon, Sept. 26-Oct. 3, 5 deaths.
Indo-China: Cholen, Sept. 19-26, 7 cases, 7 deaths.
Japan: Mojl, Oct. 22, present.
Russia: St. Petersburg, Oct. 27-Nov. 2, 142 cases, 80 deaths.

PLAGUE.

Brazil: Maranhao, Oct. 20, present.
Chile: Iquique, Oct. 6, 1 case in lazaretto.
Ecuador: Guayaquil, Oct. 3-10, 1 death.
India: General, Sept. 19-26, 3,033 cases, 2,162 deaths; Bombay, Oct. 3-13, 10 deaths; Calcutta, Sept. 12-26, 12 deaths; Rangoon, Sept. 26-Oct. 3, 2 deaths.
Indo-China: Cholen, Sept. 19-26, 9 cases, 8 deaths; Saigon, 12 cases, 9 deaths.
Peru: General, Sept. 29-Oct. 7, 28 cases, 16 deaths; Callao, 1 case, 1 death.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

CALOMEL WITH LEMONADE AND WITH CHLORIN.

ROANOKE, VA., Nov. 14, 1908.

To the Editor:—1. Is there any danger in prescribing calomel and lemonade simultaneously? 2. Is there any danger in giving calomel and chlorin water simultaneously? JAMES H. DEYERLE.

ANSWER.—1. Calomel is acted on very slowly by non-oxidizing acids, so there need be no fear of an injurious result, under ordinary conditions, from the administration of lemon juice and of calomel.

2. Chlorin water is an oxidizing agent and converts calomel into corrosive sublimate by the addition of chlorin. $HgCl + Cl = HgCl_2$. There is, therefore, considerable danger that the calomel will be changed into poisonous corrosive sublimate (mercuric chlorid) if chlorin water is given at the same time.

SPIROCHETES IN THE LUNGS.

ROSEDALE, MISS., Nov. 8, 1908.

To the Editor:—Please inform me if there are any reports of cases of spirochetal infection of the lungs.

WILLIAM B. JOHNSON.

ANSWER.—There are, of course, no recorded cases of chancre of the lungs, so there are no reports of primary infection of the lungs with the *Spirochæta pallida*. So far as we know, there are no reports of the finding of spirochetes in gummata of the lungs in acquired syphilis. Syphilitic lesions in the lungs are very uncommon and it is also difficult to find spirochetes in gummata. They are, however, occasionally found in gummata and there is no reason why they should not be found in gummata of the lung. In congenital syphilis the spirochetes have been found repeatedly in the lungs. In Hoffman's "Atlas," Plate 21, Figures 1, 2 and 3 show spirochetes in the lung of a subject of congenital syphilis.

MEDICINAL ACTION OF CHROMIUM SULPHATE.

PHILADELPHIA, Nov. 12, 1908.

To the Editor:—Please tell through the columns of THE JOURNAL, what, if any, medicinal action chromium sulphate has. R. T. D.

ANSWER.—Most authorities do not mention the chromium salts or else state that they are not used in medicine. Experimental evidence regarding the pharmacologic action appears to be lacking. L. Kolipinski (*Month. Cycl. and Med. Bull.*, September, 1908) in a recent article makes the statement, which he says is unconfirmed by others, that chromium sulphate is not poisonous and may be given in doses of eight grains three times a day. He has observed no unpleasant by-effects. He claims to have used it with success in various affections, and makes the remarkable statement that locomotor ataxia is curable by the drug. In view of the actively poisonous character of the chromates it is advisable to use even chromium sulphate with caution.

INDIGO-CARMINE AND METHYLENE-BLUE TESTS FOR KIDNEY FUNCTION.

KANSAS CITY, MO., Nov. 12, 1908.

To the Editor:—Has THE JOURNAL described the technic of the methylene-blue test of Achard and the indigo-carmine test of Voeleker and Joseph for ascertaining the functional activity of the kidneys? B. CLARK HYDE.

ANSWER.—The indigo-carmine test is described in THE JOURNAL, Jan. 2, 1904, xliv, 69, in an abstract of an article by F. Voeleker and E. Joseph (*München. med. Wchnschr.*, 1, No. 48). It consists essentially of introducing hypodermically 4 c.c. of a 4 per cent. solution of indigo-carmine and observing through the cystoscope the excretion of blue urine from one or both ureters; or the ureters may be catheterized and the urine from each collected separately. Kapsammer prefers the latter method. The methylene-blue method consists in the hypodermic injection of from 0.02 gm. to 0.05 gm. of methylene-blue. The excretion will begin in fifteen or twenty minutes in normal cases. Achard and Castaigne (*Bull. et mem. Soc. méd. d. hôp. d. Paris*, 1897, series 3, xiv, 1128) recommend the larger quantity, but Kapsammer prefers the smaller. For a full discussion of the subject see Kapsammer, "Nierendiagnostik und Nierenchirurgie," Part I, Vienna and Leipsic, 1907.

KERATINIZED CAPSULES OF IPECAC.

BRAINERD, MINN., Nov. 12, 1908.

To the Editor:—In the *Archives of Internal Medicine*, June, 1908, in an article on "Early Diagnosis and Treatment of the Presuppurative Stage of Amebic Hepatitis," Dr. Leonard Rogers of Calcutta, India, recommends the administration of ipecac in keratinized capsules. This method appealed strongly to me. During the past two months I have added "keratinized" capsules to our monthly hospital requisition, but each time reply has come back that the desired capsules could not be obtained. Can you give me the address of some dealer who handles them?

C. F. KARSHNER, M.D.

ANSWER.—We have been unable to learn that keratinized capsules are on the market. Pharmaceutical manuals, however, give methods by which any competent pharmacist may easily coat pills with keratin. In brief, the process consists in making a solution of keratin (preferably the variety of keratin which has been treated with pepsin to free it from pepsin-soluble material, and which is sold as pepsinized keratin) either in dilute acids if the pill mass resists the action of acids or in a weak alcoholic solution of ammonia if the pill mass resists alkalies. The pills are then given several coatings of this keratin solution. The following directions for the coating of pills with keratin are taken from "Prescription Practice and General Dispensing," by J. H. Beal, pages 125-126:

"To coat pills with keratin, a solution of the substance is made by heating it with a mixture of equal parts of ammonia water and dilute alcohol, or with dilute acetic acid, sprinkling the pills with the solution and rolling them in a porcelain capsule and drying. From eight to ten applications must be made to render the coating effective. The pills must not be made with an aqueous excipient, or they will contract and the coating crack. Cacao butter, or a mixture of cacao butter and yellow wax should be used. The conspergent should be either dry kaolin or powdered charcoal, and not a vegetable powder."

THE PARAFFIN IN THE BISMUTH PASTE.

WAKEFIELD, NEBR., Nov. 12, 1908.

To the Editor:—In the article on "Bismuth Treatment of Sinuses," in THE JOURNAL, March 14, 1908, p. 868, appears the following "Formula of Paste for Late Treatment:"

	gm.
Bismuth subnitrate	30
White wax	..
Soft paraffin āā	5
Vaselin	60

According to the U. S. Dispensatory, soft paraffin, petrolatum molle and vaselin are identical preparations. Still it is evident that soft paraffin in the above formula refers to some other preparation than vaselin. Kindly inform me what preparation of paraffin is intended. A. E. ENGZELIUS.

ANSWER.—Petrolatum, also called vaselin, is a semi-solid substance, a product of petroleum deodorized, and produced after the lighter oils have been distilled off. Paraffin is a wax which is obtained by pressing the oil and has a much higher degree of hardness. The various grades of paraffin differ only in their degree of hardness, the melting points ranging from 90 to 140 degrees F. Dr. Beck states that he uses a paraffin which has a melting point of 120 degrees F. The addition of this paraffin in formula No. 2 is for the purpose of obtaining a firmer paste (one that will not melt at body temperature), which will occlude fistulous tracts and be retained in them as long as the body temperature remains normal.

PHENOLPHTHALEIN.

————, CONN., Nov. 2, 1908.

To the Editor:—Please discuss phenolphthalein, its physiologic action on the bowels, its dosage, and the best method of administration. W. H. Y.

ANSWER.—A full account of the properties and action of phenolphthalein was published in this department, March 30, 1907. It is also described in "New and Nonofficial Remedies," a copy of which will be sent on receipt of 6 cents. This drug must be considered as one of the valuable contributions of chemical industry, and its importance justifies a recapitulation of our knowledge regarding it.

Phenolphthalein is a yellowish, tasteless powder, slightly soluble in water, readily soluble in alcohol and in aqueous solutions of hydroxids and carbonates. The investigations of Vamossy, Dornblüth, Tunnicliffe and others indicate that it is a safe cathartic, acting without pain in from four to six hours and leaving less tendency to sluggishness of the bowels as an after-effect than most cathartics. So far as our present knowledge goes it produces no noticeable physiologic effect except that of a purgative. When absorbed it is excreted in the urine generally unchanged in chemical character, but sometimes in combination so that its characteristic color with alkalies is only shown after the combination is broken up by heating with an acid. So far as known it does not irritate the kidneys. While overdoses may produce toxic effects by hypercatharsis no fatal case of poisoning has been reported. In one case mild toxic effects followed a dose of 1 gm. (15 grains). The dose generally recommended varies from 0.06 gm. (1 grain) to 0.3 gm. (5 grains), but it must be borne in mind that certain individuals possess a marked idiosyncrasy to phenol compounds and that in such cases phenolphthalein should be prescribed at first with caution. In most cases a dose of 0.13 gm. (2 grains) is well borne and frequently is ample. It may be given with safety in doses of 0.5 gm. (7¼ grains) and these doses seem to be necessary to secure its effect in bedridden patients or in obstinate cases. It is best given in the form of powders, capsules, pills or tablets. For example:

R	gm.	
Phenolphthalein	4	or 3i

Div. in capsules vel pulveres No. xx.

Sig.: One capsule or powder at bedtime when necessary.

CHROMATIC ABERRATION.

PHILADELPHIA, Nov. 3, 1908.

To the Editor:—While crossing a railroad track this evening, I observed what was to me a very interesting ocular phenomenon. It may be well known to oculists, but I do not recall mention of it in any text book. The phenomenon was as follows: About fifty yards away I saw a purple signal light surrounded by a blue radiation. I have a considerable degree of astigmatism and wear the usual correcting lens. I removed my glasses and the light appeared as a broad, horizontal line of bright red intersecting a vertical line of pure blue—the two primary colors, of course, which together form purple. I shall be glad of an explanation of the phenomenon.

H. L. BATES.

ANSWER.—Purple is composed of blue and red, which are refracted at different angles, so that they come to a focus at different distances from the cornea, the blue having a shorter focal distance than the red. In a normal eye the rays are mingled, as the focal distance of the retina is not exactly equal to that of either red or blue. In a myopic eye the red rays, having the longer focal distance, will reach the retina (which is placed at a greater distance from the cornea in the myopic eye than in the normal one), while the blue rays come to a clear focus only at the periphery of the fields of vision. Consequently, a person with myopia who looks at a purple light sees a red center surrounded by a blue ring. One who is hyperopic sees a blue center surrounded by a red ring. Our correspondent undoubtedly has some myopia in addition to his corrected astigmatism. When he removed his glasses the astigmatism came into play; and, as one or both eyes were shorter in the vertical than in the horizontal axis, the blue rays reached the retina in the vertical meridian and the red rays in the horizontal one. The property by which purple is thus analyzed by the eye is made use of in the chromatic aberration, or cobalt blue glass test. Cobalt blue is essentially a purple, which absorbs all light except red and blue. If such a glass is placed before an eye under the influence of a mydriatic, the following phenomena will be observed: 1. The normal eye perceives a purple spot. 2. The hyperopic eye perceives a red ring with a blue center. 3 The myopic eye perceives a blue ring with a red center. 4. An astigmatic eye perceives various other arrangements of blue and red. Descriptions of this test may be found in "Refraction of the Eye," (p. 126) by Ernest Clarke, published by William Wood & Co., and in "Refraction and How to Refract" (ed. 2, p. 143), by James Thorington, published by P. Blakiston's Son & Co., as well as in other works on ophthalmology.

Medical Education and State Boards of Registration

COMING EXAMINATIONS.

CALIFORNIA: Los Angeles, Dec. 1. Sec'y., Dr. Charles L. Tisdale, Butler Bldg., San Francisco.

DELAWARE: Regular, Dover; Homeopathic, Wilmington, Dec. 8-10. Sec'y. of Medical Council, Dr. Henry W. Briggs, Wilmington.

IOWA: Capitol Building, Des Moines, Dec. 8-10. Sec'y., Dr. Louis A. Thomas.

MARYLAND: Baltimore, Dec. 8. Sec'y., Dr. J. McPherson Scott, Hagerstown.

MARYLAND: Homeopathic, Baltimore, Dec. 8. Sec'y., Dr. J. S. Garrison, 848 W. North Ave., Baltimore.

NEW HAMPSHIRE: Concord, Dec. 29-30. Regent, Mr. H. C. Morrison.

OHIO: Columbus, Dec. 8-10. Sec'y. Dr. George H. Matson.

PENNSYLVANIA: Musical Fund Hall, Locust St., Philadelphia, Dec. 1-4. Sec'y. of Medical Council, Dr. N. C. Schaeffer, Harrisburg.

VIRGINIA: Lynchburg, Dec. 15-18. Sec'y., Dr. R. S. Martin, Stuart.

Work for a Standard Curriculum in Medical Colleges.

During the present period of reconstruction in medical colleges, probably no work is more important than that of preparing a standard medical curriculum which is based on an exhaustive study of present conditions and the requirements of modern medicine. Without such a standard there is danger that by some colleges too much stress may be laid on preliminary education, others may over-develop the scientific fundamental branches, while others may emphasize too much the clinical side of medical teaching.

The ideal medical curriculum would be one not so overcrowded as to prevent the best work but one which would furnish the best training and equipment for practitioners in medicine. So extensive has become the domain of medical knowledge that it is necessary to point out clearly what subjects should be required and what should be electives. Of the required subjects it should also be stated how much emphasis should be laid on each.

Among the electives would naturally come many of the courses on the specialties; laryngology, rhinology, ophthalmology, otology, etc., although a certain knowledge of all these subjects is necessary to every general practitioner. Among the specialties of modern medicine might well be included the positions of laboratory instructors which now demand men who are experts in their particular subjects. Such courses and research work as are intended to prepare men for these positions would naturally come among the electives and not in the required courses.

With the object of securing a standard curriculum the Council on Medical Education decided to ask the cooperation of a large number of educators representing every phase of the subject. A committee of one hundred, therefore, has been appointed which is divided into ten subcommittees, each subcommittee to cover a certain division of the curriculum. These subcommittees are now actively at work, and it is expected that the complete report will be presented at the next conference of the Council, April 5, 1909.

The following constitutes the personnel of the committee:

SECTION 1.—ANATOMY, INCLUDING HISTOLOGY AND EMBRYOLOGY.

Chairman: CHARLES R. BARDEEN, M.D., Professor of Anatomy, University of Wisconsin, College of Medicine, Madison, Wis.

ALBERT C. EYCLESHYMER, Ph.D., Professor and Director of the Department of Anatomy, Histology and Embryology, St. Louis University, Grand Ave. and Carolina St., St. Louis.

IRVING HARDESTY, Ph.D., Assistant Professor of Anatomy, University of California, Medical Department, San Francisco.

G. CARL HUBER, M.D., Professor of Histology and Embryology, University of Michigan, College of Medicine, 1330 Hill St., Ann Arbor, Mich.

GEORGE S. HUNTINGTON, M.D., Professor of Anatomy, Columbia University, 437 W. 59th St., New York City.

CLARENCE M. JACKSON, M.D., Professor of Anatomy and Histology, University of Missouri, Medical Department, Columbia.

THOMAS G. LEE, M.D., Professor of Histology and Embryology, University of Minnesota, College of Medicine and Surgery, 509 St. Anthony Parkway, S.E., Minneapolis.

FRANKLIN P. MALL, M.D., Professor of Anatomy, Johns Hopkins University, Medical Department, 1514 Bottom St., Baltimore.

JAMES P. McMURRICH, Ph.D., Professor of Anatomy, University of Toronto, Medical Department, 576 Huron St., Toronto, Canada.

GEORGE A. PIERSOL, M.D., Professor of Anatomy, University of Pennsylvania, Department of Medicine, 4724 Chester Ave., Philadelphia.

SECTION 2.—PHYSIOLOGY AND PHYSIOLOGIC CHEMISTRY.

Chairman: ELIAS P. LYON, Ph.D., Professor of Physiology, St. Louis University, School of Medicine, St. Louis.

PERCY M. DAWSON, M.D., Associate Professor of Physiology, Johns Hopkins University, Medical Department, Baltimore.

OTTO FOLIN, Ph.D., Professor of Biologic Chemistry, Harvard Medical School, Longwood Ave., Boston.

WALTER E. GARREY, Ph.D., Professor of Physiologic Chemistry, Cooper Medical College, San Francisco.

WINFIELD SCOTT HALL, M.D., Professor of Physiology, Northwestern University Medical School, 2431 Dearborn St., Chicago.

FREDERIC S. LEE, Ph.D., Professor of Physiology, Columbia University, College of Physicians and Surgeons, New York City.

WARREN P. LOMBARD, M.D., Professor of Physiology, University of Michigan, College of Medicine, 805 Oxford Road, Ann Arbor, Mich.

GRAHAM LUSK, Ph.D., Professor of Physiology, University and Bellevue Hospital Medical College, 338 E. 26th St., New York City.

GUSTAV MANN, M.D., Professor of Physiologic Chemistry, Tulane University of Louisiana, New Orleans.

ALBERT P. MATHEWS, Ph.D., Professor of Physiologic Chemistry, University of Chicago.

SECTION 3.—PATHOLOGY AND BACTERIOLOGY.

Chairman: WILLIAM T. COUNCILMAN, M.D., Professor of Pathology, Harvard Medical School, 240 Longwood Ave., Boston.

J. G. ADAMI, M.D., Professor of Pathology, McGill University, Medical Department, Montreal, Canada.

W. M. L. COPLIN, M.D., Professor of Pathology and Bacteriology, Jefferson Medical College, Tenth and Walnut Sts., Philadelphia.

HAROLD C. ERNST, M.D., Professor of Bacteriology, Harvard Medical School, 240 Longwood Ave., Boston.

JAMES EWING, M.D., Professor of Pathology, Cornell University Medical College, 256 W. 57th St., New York City.

LUDWIG HEKTOEN, M.D., Professor and Head of the Department of Pathology, Rush Medical College, 5803 Washington Ave., Hyde Park, Chicago.

WILLIAM T. HOWARD, M.D., Professor of Pathology, Pathological Anatomy and Bacteriology, Western Reserve University, 1838 E. 65th St., Cleveland, Ohio.

RICHARD M. PEARCE, M.D., Professor of Pathology and Bacteriology, University and Bellevue Hospital Medical College, 338 East 26th St., New York City.

ALDRED S. WARTHIN, M.D., Professor of Pathology, University of Michigan, College of Medicine and Surgery, 924 Baldwin Ave., Ann Arbor, Mich.

WILLIAM H. WELCH, M.D., Baxley Professor of Pathology, Johns Hopkins Medical School, 807 St. Paul St., Baltimore.

SECTION 4.—PHARMACOLOGY, TOXICOLOGY AND THERAPEUTICS.

Chairman: TORALD SOLLMANN, M.D., Professor of Pharmacology and Materia Medica, Pharmacologic Laboratory, Western Reserve University Medical Department, Cleveland, Ohio.

JOHN J. ABEL, M.D., Professor of Pharmacology, Johns Hopkins University Medical School, Charles St. Ave., (P. O. Sta. L.) Baltimore.

JOSEPH A. CAPPS, M.D., Assistant Professor of Medicine, Rush Medical College, University of Chicago, 100 State St., Chicago.

DAVID L. EDSALL, M.D., Assistant Professor of Medicine, University of Pennsylvania, Medical Department, 1432 Pine St., Philadelphia.

CHARLES WALLIS EDMUNDS, M.D., Junior Professor of Therapeutics and Materia Medica, University of Michigan, College of Medicine, 520 East Ann St., Ann Arbor, Mich.

JOHN TAYLOR HALSEY, M.D., Professor of Materia Medica, Therapeutics and Clinical Medicine, Tulane University of Louisiana, 124 Baronne St., New Orleans.

EGBERT LEFEVRE, M.D., Professor of Therapeutics and Clinical Medicine, University and Bellevue Hospital Medical College, 52 West 56th St., New York City.

ELI H. LONG, M.D., Professor of Materia Medica and Therapeutics, University of Buffalo, Medical Department, Buffalo, N. Y.

WILLIAM DEBERNIERE MACNIDER, M.D., Professor of Pharmacology and Bacteriology, University of North Carolina, Chapel Hill.

OLIVER THOMAS OSBORNE, M.D., Professor of Materia Medica and Therapeutics, and Clinical Professor of Medicine, Yale Medical School, 252 York St., New Haven, Conn.

SECTION 5.—MEDICINE, INCLUDING PEDIATRICS AND NERVOUS AND MENTAL DISEASES.

Chairman: GEORGE DOCK, M.D., Professor of Medicine, Tulane University of Louisiana, 124 Baronne St., New Orleans.

GEORGE BLUMER, M.D., Professor of the Theory and Practice of Medicine, Yale Medical School, New Haven, Conn.

WILLIAM FITCH CHENEY, M.D., Professor of Principles and Practice of Medicine, Cooper Medical College, Shreve Bldg., San Francisco.

HENRY A. CHRISTIAN, M.D., Professor of the Theory and Practice of Physic, Harvard Medical School, 252 Marlboro St., Boston.

F. X. DERCUM, M.D., Professor of Nervous and Mental Diseases, Jefferson Medical College, 1719 Walnut St., Philadelphia.

FREDERICK FORCHHEIMER, M.D., Professor of Theory and Practice of Medicine and Clinical Medicine, Medical College of Ohio, Cincinnati.

CHARLES L. GREENE, M.D., Professor of Medicine, University of Minnesota, College of Medicine and Surgery, Minneapolis.

L. EMMETT HOLT, M.D., Carpentier Professor of the Diseases of Children, Columbia University, College of Physicians and Surgeons, 14 W. 55th St., New York City.

JOHN H. MUSSER, M.D., Professor of Clinical Medicine, University of Pennsylvania, Medical Department, Philadelphia.

W. GILMAN THOMPSON, M.D., Professor of Medicine, Cornell University, Medical College, 34 E. 31st St., New York City.

SECTION 6.—SURGERY; GENERAL AND SPECIAL.

Chairman: CHARLES H. FRAZIER, M.D., Professor of Clinical Surgery, University of Pennsylvania, Department of Medicine, 1724 Spruce St., Philadelphia.

DUDLEY PETER ALLEN, M.D., Professor of the Theory and Practice of Surgery and Clinical Surgery, Western Reserve University, Medical Department, 1110 Euclid Ave., Cleveland, Ohio.

JOSEPH A. BLAKE, M.D., Professor of Surgery, Columbia University, College of Physicians and Surgeons, 601 Madison Ave., New York City.

HERBERT L. BURRELL, M.D., Professor of Clinical Surgery, Harvard Medical School, 22 Newbury St., Boston.

FREDERICK HENRY GERRISH, M.D., Professor of Surgery, Medical School of Maine, 675 Congress St., Portland, Me.

WILLIAM S. HALSTED, M.D., Professor of Surgery, Johns Hopkins University, Medical School, Baltimore.

RUDOLPH MATAS, M.D., Professor of General and Clinical Surgery, Tulane University of Louisiana, 2255 St. Charles Ave., New Orleans.

LEWIS S. MCMURTRY, M.D., Professor of Abdominal Surgery and Gynecology, University of Louisville, Medical Department, The Atherton, Fourth and Chestnut Sts., Louisville, Ky.

WILLIAM L. RODMAN, M.D., Professor of the Principles of Surgery and Clinical Surgery, Medico-Chirurgical College, 1904 Chestnut St., Philadelphia.

HARRY M. SHERMAN, M.D., Professor of the Principles and Practice of Surgery, University of California, Medical Department, 2210 Jackson St., San Francisco.

SECTION 7.—OBSTETRICS AND GYNECOLOGY.

Chairman: JOSEPH B. DELEE, M.D., Professor of Obstetrics, Northwestern University Medical School, 810-34 Washington St., Chicago.

JOHN G. CLARK, M.D., Professor of Gynecology, University of Pennsylvania, Department of Medicine, 2017 Walnut St., Philadelphia.

EDWIN B. CRAGIN, M.D., Professor of Obstetrics and Gynecology, Columbia University College of P. and S., 10 W. 50th St., New York City.

J. CLIFTON EDGAR, M.D., Professor of Obstetrics, Cornell University Medical College, 50 E. 34th St., New York City.

CHARLES M. GREEN, M.D., Professor of Obstetrics, Harvard Medical School, 78 Marlborough St., Boston.

JAMES R. GUTHRIE, M.D., Professor of Obstetrics and Gynecology, State University of Iowa, Medical Department, 1005 Locust St., Dubuque, Iowa.

ERNEST S. LEWIS, M.D., Professor of Obstetrics and Gynecology, Tulane University of Louisiana, 124 Baronne St., New Orleans.

REUBEN PETERSON, M.D., Professor of Obstetrics, University of Michigan, College of Medicine, 620 Forest Ave., Ann Arbor, Mich.

HENRY SCHWARTZ, M.D., Professor of Obstetrics and Gynecology, Washington University, Medical Department, St. Louis.

J. WHITRIDGE WILLIAMS, M.D., Professor of Obstetrics, Johns Hopkins University Medical School, 1128 Cathedral St., Baltimore.

SECTION 8.—DISEASES OF THE EYE, EAR, NOSE AND THROAT.

Chairman: GEORGE E. DESCHWEINITZ, M.D., Professor of Ophthalmology, University of Pennsylvania, Department of Medicine, 1705 Walnut St., Philadelphia.

DISEASES OF THE EYE.

EDWARD JACKSON, M.D., Professor of Ophthalmology, University of Colorado, School of Medicine, 1434 Glenarm St., Denver.

MYLES STANDISH, M.D., Assistant Professor of Ophthalmology, Harvard Medical School, 256 Newbury St., Boston.

WILLIAM H. WILDER, M.D., Professor and Head of the Department of Ophthalmology, University of Chicago, 103 State St., Chicago.

DISEASES OF THE EAR.

CLARENCE JOHN BLAKE, M.D., Professor of Otology, Harvard Medical School, 226 Marlboro St., Boston.

B. ALEXANDER RANDALL, M.D., Clinical Professor of Diseases of the Ear, University of Pennsylvania, Department of Medicine, 1717 Locust St., Philadelphia.

FRANK C. TODD, M.D., Professor of Ophthalmology and Otology, University of Minnesota, College of Medicine, 304 Pillsbury Bldg., Minneapolis.

DISEASES OF THE NOSE AND THROAT.

CORNELIUS G. COAKLEY, M.D., Professor of Laryngology, University and Bellevue Hospital Medical College, 53 W. 56th St., New York City.

D. BRADEN KYLE, M.D., Professor of Laryngology, Jefferson Medical College, 1517 Walnut St., Philadelphia.

JOHN N. MACKENZIE, M.D., Clinical Professor of Laryngology and Rhinology, Johns Hopkins Medical School, 879 Park Ave., Baltimore.

SECTION 9.—DERMATOLOGY AND VENEREAL DISEASES.

Chairman: WILLIAM A. PUSEY, M.D., Professor of Dermatology and Clinical Dermatology, College of Physicians and Surgeons, 72 Madison St., Chicago.

JOHN T. BOWEN, M.D., Edward Wigglesworth Professor of Dermatology, Harvard Medical School, 14 Marlboro St., Boston.

WILLIAM T. CORLETT, M.D., Professor of Dermatology and Syphilology, Western Reserve University, Medical Department, 1935 Euclid Ave., Cleveland, Ohio.

ISADORE DYER, M.D., Professor of the Diseases of the Skin, Tulane University of Louisiana, New Orleans.

JOHN A. FORDYCE, M.D., Professor of Dermatology, University and Bellevue Hospital Medical College, 80 W. 40th St., New York City.

T. CASPER GILCHRIST, M.D., Clinical Professor of Dermatology, Johns Hopkins University Medical Department, 330 N. Charles St., Baltimore.

WILLIAM A. HARDAWAY, M.D., Professor of Diseases of the Skin and Syphilis, Washington University, Medical Department, 4500 Olive St., St. Louis.

MILTON B. HARTZELL, M.D., Associate in Dermatology, University of Pennsylvania, Department of Medicine, 3644 Chestnut St., Philadelphia.

DOUGLASS W. MONTGOMERY, M.D., Professor of Diseases of the Skin, University of California, Medical Department, 2419 California St., San Francisco.

GROVER W. WENDE, M.D., Clinical Professor of Dermatology, University of Buffalo, Department of Medicine, 471 Delaware Ave., Buffalo, N. Y.

SECTION 10.—HYGIENE, MEDICAL JURISPRUDENCE AND MEDICAL ECONOMICS.

Chairman: F. F. WESBROOK, M.D., Professor of Pathology and Bacteriology, University of Minnesota, College of Medicine, Minneapolis.

CHARLES V. CHAPIN, M.D., Superintendent of Health, Providence, R. I.

IRVING FISHER, Ph.D., Professor of Political Economy, Yale University, 460 Prospect St., New Haven, Conn.

JOHN S. FULTON, M.D., Secretary-General, Sixth International Congress on Tuberculosis, 714 Colorado Bldg., Washington, D. C.

J. N. MCCORMACK, M.D., Secretary Kentucky State Board of Health, Bowling Green, Ky.

C. O. PROBST, M.D., Secretary Ohio State Board of Health, Columbus, Ohio.

M. P. RAVENEL, M.D., Professor of Bacteriology, University of Wisconsin, Madison, Wis.

FRANKLIN C. ROBINSON, A.M., Professor of Chemistry, Mineralogy and Natural Science, Bowdoin College, 214 Maine St., Brunswick, Me.

M. J. ROSENAU, M.D., U. S. Public Health and Marine-Hospital Service, Washington, D. C.

VICTOR C. VAUGHAN, M.D., Professor of Hygiene and Physiologic Chemistry, University of Michigan, College of Medicine, Ann Arbor, Mich.

Massachusetts July and September Reports.

Dr. Edwin B. Harvey, secretary of the Board of Registration in Medicine, reports the written examinations held at Boston, July 14-16 and Sept. 8-10, 1908. The number of subjects examined was 13; total number of questions asked, 70; percentage required to pass, 75.

At the examination held July 14-16, the total number of candidates examined was 131, of whom 91 passed, including one non-graduate, and 40 failed, including 13 non-graduates. The following colleges were represented:

PASSED. College.	Year Grad.	Per Cent.
Yale Med. School	(1908)	79.4, 80.6, 82.1
Medical School of Maine	(1904) 82; (1908)	79.1
University of Maryland	(1908)	79.3
College of P. and S., Baltimore	(1908)	75, 75, 77.5
Baltimore Med. Coll.	(1907) 76.6; (1908)	75, 75, 79, 79.7
College of P. and S., Boston	(1908)	75, 75, 76.4, 82.4
Harvard Med. School, (1895) 80.3; (1907) 75.4, 76.7; (1908) 75, 75, 75, 75.2, 76.7, 77.3, 78.1, 78.3, 80.1, 80.2, 80.6, 81.2, 81.5, 81.5, 82.4, 83.5, 86.		
Boston University, (1908) 75, 75, 75.2, 76.2, 76.3, 76.3, 76.9, 77.7, 78.5, 79.7, 80.2, 81.1, 83.		
Tufts Coll. Med. School, (1907) 76.2, 80; (1908) 75, 75, 75, 75, 75, 75.2, 75.5, 75.5, 75.8, 766.2, 76.2, 76.3, 76.5, 76.5, 76.6, 76.6, 76.7, 76.9, 78, 78.6, 78.7, 78.7, 78.7, 78.8, 78.8, 79.6, 81.2, 81.3, 83.2.		
University of Minnesota	(1901)	78.2
College of P and S., New York	(1905)	78.3
University and Bellevue Hosp. Med. Coll.	(1900) 77; (1907)	76
New York Homeo. Med. Coll.	(1905)	81.4
Western Reserve University	(1905)	80.6
Jefferson Med. Coll.	(1908)	75, 81.3
University of Vermont	(1908)	77.1

FAILED.		
George Washington University	(1907)	71.7
Georgetown University	(1906)	71.7
Maryland Med. Coll.	(1908)	60
Boston University	(1908)	54.5, 68.7
Baltimore Med. Coll., (1905) 62.4; (1907) 67.6, 71.7; (1908) 60.9, 61.1, 69, 69.7, 71, 72.4.		
Baltimore University	(1895)	36
College of P. and S., Boston	(1905) 63.5; (1908)	65.3, 66, 68.7
Tufts Coll. Med. School	(1908)	67, 72
North Carolina Med. Coll.	(1904)	69.9
University of Vermont	(1906)	70.5
Laval University, Quebec	(1905)* (1908)	67.6
Imperial Alexanders Univ., Finland	(1902)	58.4
University of Naples, Italy	(1906)	67.5

At the examination held September 8-10, the total number of candidates examined was 65, of whom 35 passed, including one non-graduate and 30 passed, including 2 non-graduates. The following colleges were represented:

PASSED. College.	Year Grad.	Per Cent.
George Washington University	(1907)	75
Georgetown University	(1905)	77.1
Yale Med. School	(1907)	78.3
Rush Med. Coll.	(1882)	76.5
National Med. University	(1908)	77.7
Baltimore Med. Coll.	(1905) 75; (1908)	75, 78.5, 79.2
Harvard Med. School, (1906) 75.8, 79.6; (1907) 80.3; (1908) 75.7, 79.5, 79.8, 80.2.		
College of P. and S., Boston	(1907) 75; (1908)	75, 75
Tufts Coll. Med. School, (1907) 77.7, 78.5; (1908) 75, 77.1, 77.5, 82.9.		
Boston University	(1907) 75; (1908)	75
Dartmouth Med. School	(1908)	78
College of P. and S., New York	(1906)	78.2
Long Island Coll. Hosp.	(1907)	78.2
Medico-Chirurgical Coll., Philadelphia	(1908)	78
Jefferson Med. Coll.	(1906) 80.2; (1908)	78.7
Imperial Alexanders Univ. Finland, Russia	(1886)	75

FAILED.		
Georgetown University	(1906)	68.5
Chicago Homeopathic Med. Coll.	(1890)*	
American Med. Mis. Coll.	(1906)	72.5
Chicago Coll. of Med. and Surg.	(1908)	68.2, 70.7
Tufts Coll. Med. School	(1908)	70, 72.5
Boston University	(1905)	68, 71.1
Baltimore Med. Coll., (1905) 66.1; (1907) 68.5, 69.9; (1908) 67.9, 70.5, 71.8.		
Baltimore University	(1895)	31.7
College of P. and S., Boston	(1905) 63.2; (1908)	58.8, 72.1
Hahnemann Med. Coll., Philadelphia	(1890)	53.4
University of Vermont	(1884) 64.9; (1907)	71.3
Laval University, Quebec	(1905)* (1908)	62.2
University of Palermo, Italy	(1891)	62.5
University of Naples, Italy	(1890)* (1895)	62.2
University of Tiflis, Russia	(1874)*	

* Did not complete examination.

Marriages

IRA M. MILLER, M.D., to Miss Alice A. Starke, both of Chicago, October 21.

ALFRED ULLMAN, M.D., Baltimore, to Miss Bertha Katz, at Philadelphia, November 12.

DANIEL M. KELLY, M.D., Baraboo, Wis., to Miss O'Brien of Harvard, Ill., November 18.

G. B. SIMS, M.D., Hastings, Neb., to Miss Olga Jacobsen, of Edgewater, Chicago, November 3.

LOUIS W. ECKLES, JR., M.D., Louisville, to Miss Glenna Lee Sells, of Anderson, Ind., November 11.

CHARLES M. SCOTT, M.D., Bluefield, W. Va., to Miss Hazel Morton, of Ashland, Ky., November 10.

ELLISTON J. MORRIS, M.D., Philadelphia, to Miss Josephine C. Mitchell, of New York City, November 11.

JOHN GLENN YOUNG, M.D., Pontiac Ill., to Miss Floy Martha Reynolds, of Genoa Junction, Wis., October 28.

DENNIS A. BETHEA, M.D., Terre Haute, Ind., to Miss Alice Blackman McLeod, of Dillon, S. C., November 11.

JOSEPHUS TUCKER ULLOM, M.D., Germantown, Philadelphia, to Miss Selena P. Hughes, at Philadelphia, October 15.

ERNEST LEROY BOLTON, M.D., to Miss Maude Mary Luce, both of Chilton, Wis., at Kewaunee, Wis., November 12.

Deaths

Thomas M. Wilson, M.D. Rush Medical College, 1906; a B.Sc. of the University of Toronto; and about to receive the degree of Ph.D. from the University of Chicago; an interne in the Presbyterian Hospital and instructor in pathology in the Chicago Veterinary College; who had devoted all his leisure for a year past to experiments in the laboratories of the McCormick Memorial Institute in an attempt to produce a serum to counteract the effect of the bacillus of glanders; died November 19, in the Presbyterian Hospital, from glanders, after an illness of three weeks, aged 38, a martyr in the cause of scientific research.

Adoniram Judson Gibbs, M.D. Pennsylvania Medical College, Gettysburg, 1857; a member of the American Medical Association; city physician and a member and formerly president of the board of health of Denison, Texas, and Eureka Springs, Ark.; formerly president of the Denison (Texas) and Eureka Springs and Carroll County (Ark.) Medical Society; surgeon in the Confederate service during the Civil War; formerly editor of the *Eureka Springs Medical Journal;* died at his home in Denison, November 12, aged 72.

Elihu T. Mendenhall, M.D. Medical College of Ohio, 1877; a member of the Indiana State Medical Association; a veteran of the Civil War; for two terms a member of the city council of New Castle, Ind.; for many years health officer of Henry county, and secretary of the local board of U. S. pension examining surgeons; died at Mechaniesburg, Ind., November 14, from disease of the stomach, aged 64.

Charles M. Gravis, M.D. Medical College of Indiana, Indianapolis, 1871; a member of the Indiana State Medical Association; a veteran of the Civil War; and treasurer of the local board of U. S. pension examining surgeons; medical director of Highland Sanitarium, Martinsville; died at his home in that city, November 11, from cerebral hemorrhage, aged 63.

Mark P. Perry, M.D. College of Physicians and Surgeons, Baltimore, 1884; formerly of Macon, N. C.; a member of the Medical Society of the State of North Carolina, and for six years its treasurer; the head of a hospital in Richwood, W. Va.; died in Johns Hopkins Hospital, Baltimore, November 9, aged 40.

Lyman R. Farr, M.D. Chicago Medical College, 1884; a member of the State Medical Society of Wisconsin; visiting physician to St. Mary's and the Strong Emergency hospitals, Beloit, Wis.; for a long time city physician of Beloit; died at his home November 12, from edema of the glottis, aged 46.

William Henry Long, Jr., M.D. College of Physicians and Surgeons, New York City, 1898; a member of the Medical Society of New Jersey; surgeon to the Somerset County Hospital and coroner and physician to Somerset county; died at his home in Somerville, May 20, aged 31.

Thomas J. Lipscomb, M.D. Medical College of the State of South Carolina, Charleston, 1857; a Confederate veteran; superintendent of the state penitentiary, Newberry, from 1878 to 1890; mayor of Newberry in 1898; died at his home in Columbia, S. C., November 4, aged 75.

Alonzo Pettit, M.D. University of Buffalo, N. Y., 1867; a member of the American Medical Association; one of the organizers of, and consulting surgeon, to the Elizabeth (N. J.) General Hospital; died at his home in Elizabeth, November 14, from heart disease, aged 66.

Charles Smith Boynton, M.D. Medical School of Maine, Brunswick, 1864; of Burlington, Vt.; adjunct professor of chemistry in the University of Vermont from 1890 to 1898; fell down an elevator shaft in Burlington, November 14, and was instantly killed, aged 72.

James E. Stanton, M.D. College of Physicians and Surgeons, Keokuk, 1872; a member of the Iowa State Medical Society; for more than fifty years a practitioner of Ohio and Chariton, Iowa; died at his home in Chariton, November 6, from cerebral hemorrhage, aged 80.

Levi Saunders, M.D. Harvard Medical School, Boston, 1857; common councilman of Gloucester in 1876 and alderman in 1877 and 1878; from 1879 to 1887 a member of the school committee; died at his home in Lanesville, Gloucester, Mass., November 11, aged 83.

Lucy M. Warner, M.D. Womans Medical College of Pennsylvania, Philadelphia, 1905; a member of the attending staff of the Wisconsin Northern Hospital for the Insane, Winnebago; died suddenly in that institution, November 11, from heart disease, aged 26.

Herman Cooper, M.D. Dartmouth Medical School, Hanover, N. H., 1883; a member of the American Medical Association; died at his home in Amesbury, Mass., from thrombosis of the pulmonary vein, and interstitial nephritis, November 10, aged 49.

Oliver W. Hatch (years of practice, Ind.); at one time secretary of the board of health of Elkhart; for more than half a century a practitioner of medicine; died at his home in Cassopolis, Mich., November 11, from pneumonia, aged 83.

William R. Schoonover, M.D. Kentucky School of Medicine, Louisville, 1876; of Warsaw, Ind.; physician to the Winona Assembly; died in the Northern Indiana State Hospital for the Insane, Longcliff, Logansport, November 12, aged 68.

Howard E. Gates, M.D. Long Island College Hospital, Brooklyn, 1861; a veteran of the Civil War, and for twenty-five years thereafter a practitioner of Litchfield, Conn.; died November 9, at his home in Colorado Springs, aged 69.

Samuel A. Mason, M.D. Memphis (Tenn.) Hospital Medical College, 1888; for thirty-three years a practitioner of Arkansas; shot and killed himself at his home in Hattiesville, November 9, while temporarily insane, aged 59.

Joseph Lavender Laxton, M.D. Washington University, Baltimore, 1868; a member of the Medical Society of North Carolina, and a Confederate veteran; died at his home in Morganton, November 11, from acute gastritis, aged 73.

Ogden Doremus King, M.D. Long Island College Hospital, Brooklyn, N. Y., 1884; a member of the Medical Society of the State of North Carolina; died at his home in Albemarle, November 11, from nephritis, aged 49.

George Corrie, M.D. Medical College of Virginia, Richmond, 1888; formerly of Back Bay, Va.; a member of the Medical Society of Virginia; died at his home in Knott's Island, N. C., October 10, from nephritis, aged 51.

Alexander Stilwell, M.D. University of Michigan, Ann Arbor, 1867; a member of the American Medical Association; since his graduation a practitioner of Dwaarkill, N. Y.; died at his home, November 7, aged 71.

Patrick Eugene Sullivan, M.D. College of Physicians and Surgeons, Boston, 1900; for six years ambulance surgeon of Lowell, Mass.; died at the home of his cousin in Lowell, November 10, aged 35.

Paul W. Kirkpatrick, M.D. Vanderbilt University, Nashville, 1893; of Alamogordo, N. M.; a member of the New Mexico Medical Association; died in Mexico from tuberculosis, November 7, aged about 40.

Charles Herbert Brereton, M.D. Medical Department Victoria College, Toronto, 1868; M.C.P.&S., Ont., 1868; of Bethany, Ont.; died at the home of his son in Carnduff, Sask., September 6, aged 63.

Riley Wiltshire Cavins, M.D. Indiana Medical College, Indianapolis, 1872; of Sterling, Kan.; died at the home of his mother in Bloomfield, Ind., April 30, from valvular heart disease, aged 62.

James R. Meeks, M.D. Starling Medical College, Columbus, Ohio, 1863; for many years a practitioner of Dallas; died at the home of his son in Kirkwood, St. Louis, November 9, aged 76.

David K. Bechtel, M.D. Howard University, Washington, D. C., 1879; of Kulpsville, Pa.; a patient in a private hospital in Philadelphia, was burned to death November 12, aged 63.

George W. Root, M.D. Cleveland Homeopathic Medical College, 1902; of Alliance, Ohio; was accidentally shot and killed while hunting near Birkendale, Ont., November 7, aged 27.

Rolla W. Bula, M.D. Philadelphia University of Medicine and Surgery, 1870; died at his home in Indianapolis, November 10, a year after a surgical operation, aged 60.

Alfred F. Griggs, M.D. Atlanta (Ga.) Medical College, 1895; formerly of Birmingham, Ala.; died at his home in Reno, Nev., November 9, from tuberculosis, aged 34.

Lewis Lamar, M.D. Starling Medical College, Columbus, Ohio, 1867; died at his home in Benevola, near Hagerstown, Md., November 12, from paralysis, aged 70.

George P. Boone, M.D. University of Louisville (Ky.), 1898; formerly of Beard, Ky.; died at his home in Colorado Springs, November 10, from tuberculosis, aged 32.

Anson Sprague, M.D. Botanico-Medical College of Ohio, Cincinnati, 1876; of Newville, Cal.; died in the Glenn County Hospital, Willows, Cal., recently, aged 78.

Joseph Weeks, M.D. Physio-Medical Institute, Cincinnati, 1861; died at his home in Mechaniesburg, Ind.; November 16, from heart disease, aged 88.

George Joel Henry, M.D. Hahnemann Medical College, Philadelphia, 1908; died suddenly at his home in Hanover, Pa., November 7, aged 26.

Edward Dodd, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1903; of Winnetoon, Neb.; died in Dansville, N. Y., April 27, aged 29.

Josiah E. Hawkins, M.D. Cincinnati College of Medicine and Surgery, 1872; died at his home in Bayou Chicot, La., October 22, aged 71.

Elliott L. Blackmore, M.D. Washington University, St. Louis, 1871; died at his home in Aplington, Iowa, recently, aged 66.

George O. Brown, M.D. Pulte Medical College, Cincinnati, 1886; died at his home in Georgetown, Ky., April 13, aged 67.

Luther Kimbell (license, Conn., 1893), of Norwich, Conn.; died in a hospital in that city, November 11, aged 75.

John B. C. Wright, M.D. Atlanta (Ga.) Medical College, 1866; of Elko, S. C.; died recently, aged 70.

Society Proceedings

COMING MEETINGS.

Southern Surgical and Gynec. Assn., St. Louis, Dec. 15-17.
Western Surgical and Gynec. Assn., Minneapolis, Dec. 29-30.
American Assn. of Anatomists, Baltimore, Dec. 29-31.

AMERICAN ELECTROTHERAPEUTIC ASSOCIATION.

Eighteenth Annual Meeting, held in New York, September 22-24, 1908.

The president, DR. HERBERT F. PITCHER, Haverhill, Mass., in the Chair.

The officers elected for the ensuing year were enumerated in THE JOURNAL, Oct. 3, 1908, p. 1165.

Advancement of the Association.

DR. HERBERT F. PITCHER, Haverhill, Mass., in his presidential address stated that as a therapeutic society the association formed the missing link in the practice of medicine. The association was established eighteen years ago and was the first of its kind in existence. Until within a few years, there were only 150 members, now there were only 200. With the splendid opportunity offered by the association for research and advancement the reason for this stagnation was not apparent; the association should have a thousand members. A subject of the greatest importance and one which should be voted on at once, was that of changing the association to a corporate body. The association did not expect to be defendant in a suit for damages, but it was well "in time of peace to prepare for war." Investigation and research should be carried on in a scientific manner by all the members, not for personal aggrandizement alone, but for the advancement of science. Every theory, however absurd, should have the benefit of investigation.

Disruptive High-Frequency Discharges, by the Reaction Method, as a New and Important Therapeutic Agent.

DR. MORRIS W. BRINKMAN, New York: Since any degree of energy may be the source of a sensory impression, and according to the degree would be the acuteness of the perception, so a tissue at variance with its normal sensory capacity may be hyperesthetic or anesthetic. All contemplating the use of this method should realize the importance of thoroughly controlling and measuring the current employed. The duration of the treatment is brief and is determined by a primary anemia which is perfectly obvious. Cessation of the treatment is followed by congestion, depending for its vigor on many conditions which present themselves to every careful operator. The electrodes must be exactly adapted to the location under treatment, and are invariably provided with an insulator, whose function is to insure the delivery of the spark at the desired point, from the sharp metallic end of the electrode. The metallic electrode should be so adjusted in its glass sheath that a definite spark length will be secured. I have rarely found a current greater than 600 watts necessary. The procedure is valuable for all forms of localized pigmentation, sluggish ulcers, the obliteration of fine blood vessels when heavily applied, superficial tuberculous conditions, etc. It may be applied to a great number of conditions of the mucous membranes. The use of the static spark in the past for similar conditions is known to every practical worker, but the efficacy was so small as to make it valueless for serious work of this kind.

Static Brush Discharge Concentrated to a Blue Pencil Point.

DR. FREDERIC DE KRAFT, New York: The brush discharge concentrated to a blue pencil flame when obtained from a static machine having from sixteen to twenty revolving plates running at a fairly high rate of speed and applied to the bare skin of the patient has been the means of securing results when other measures had failed. Its action is attended with the formation of a quantity of ozone and nitrous oxid. Repeated applications along the spine and over the abdomen increase peristalsis of the intestines. I have seen a swollen cheek restored to its natural color in a few minutes. Sprained ankles and other joints have been speedily relieved of swelling and pain. Insomnia has yielded in a few treatments. In constipation due to deficient secretion, and in those cases in which an element of spasm of the muscular layer is present, good results have been obtained. Neurasthenic patients have been helped, as well as severe cases of inflammation of the sciatic nerve following or due to gonorrhea.

Treatment of Enlarged Prostate by High-Frequency Current.

DR. M. M. JOHNSON, Hartford, Conn.: Dr. Hunter of Norfolk, Va., brought the Roentgen ray to the foreground as a treatment of this condition, on account of its well-established atrophying power on glandular tissue. The patient is placed in the Sims position. It is not necessary to insulate the couch. A vacuum rectal tube is lubricated and passed into the rectum, placed firmly against the prostate, and held there by the operator, who raises and lowers the handle of the tube holder, moving the electrode over the entire surface of the prostate gland. The tube holder is connected with the resonator by a single wire. The strength of the current is indicated by the spark gap. The patient is not conscious of the least discomfort. Of the 12 patients treated, 6 were senile hypertrophy and 6 were in men under 45 years of age, and who were suffering from nervous breakdown. The humane feature of the treatment is so marked; there is no ether, vomiting, nervous shock, tedious convalescence, or loss of valuable time, and no death.

Catarrhal Deafness and Its Treatment.

DR. ALBERT C. GEYSER, New York: The changes or deviations which take place in catarrhal deafness are as follows: The Eustachian tube is closed, preventing the entrance of air and the hindering of drainage. The tympanic membrane is forced inward by the external air pressure, and is held there and prevented from vibrating. The ossicles are crowded together with more or less inflammatory changes in their articulations, and their free movement is hindered and no vibration reaches the perceptive apparatus. Assuming that the nasopharynx has been properly cleansed, the high-frequency current from a glass vacuum electrode delivered to the entire mucous membrane of the nose is probably the best stimulating measure. An aseptic or antiseptic spray should be used. An attempt should then be made to force air into the Eustachian tube. To break up the fibrous ankylosis that exists between the tympanic membrane and the articulations of the chain of ossicles, a pump is used capable of alternating between a suction and compression stroke; this pump is attached to an Otis auroscope. The pump should be so adjusted that the suction stroke only is used.

Tuberculosis and Its Treatment.

DR. J. D. GIBSON, Denver, Colo.: In addition to the ordinary treatment of the disease, I have added the *x*-ray, electricity and ozone. I use the *x*-ray to produce a hyperemia, local congestion or engorgement of the tissues treated. This congestion prepares them for the next step in the process, the inhibition and destruction of the bacilli. I use electricity only for its tonic properties. The static high tension currents, as the brush discharge and wave currents, are those I generally use.

Possibilities of Radiant Light.

DR. T. D. CROTHERS, Hartford, Conn.: Every year the so-called physical therapeutic measures become more prominent, and in connection with drugs, their effects are most promising. The radiant light bath and concentrated radiant light are agents of great and largely unknown power. The question of the value of light in such conditions as rheumatism, acute and chronic inflammations, neuritis, cirrhosis and so-called malaria is one of great difficulty and depends largely on the accuracy of the diagnosis. In a general way, if the principal derangements are nutritional disturbance and starvation, the light has a variable effect. If the main difficulty is in the circulatory apparatus, its value is more pronounced. In toxemic conditions with congestion and defective circulation, it has a marked action, and in the psychic and functional disturbances its effects are both start-

ling and disappointing. My conclusions have been that only from a general clinical study can any reliable estimation be made of the value of light in therapeutics, and this must be made by comparisons and combinations with other measures.

Electricity in the Relief of Pain.

DR. F. HOWARD HUMFRIS, Honolulu, H. T.: In electricity we have an agent which affords instant relief in the majority of cases of pain and from its mode of action tends to remove the cause. Electricity is not only palliative but curative. The different modes of electricity from which we have to choose for the relief of pain are the direct current, the induced current, the static modalities, the sinusoidal, magnetic currents, the various high-frequency currents, phototherapy and perhaps the vibrator since it is driven by an electric motor. The secret of success lies in the choice of the appropriate modality. Unfortunately, we have as yet no laws to guide us as to what modality is best suited to each condition. For most of the neuralgias, a mild constant current will often succeed where most remedies fail. Static electricity fills an important place as an agent in the relief of pain. The five-hundred-candle power light has a remarkable action in the relief of pain. The use of the *x*-ray for the same purpose is known to all. When the pain is generalized the radiant light bath, with 1,000 candle power, is useful. Patients should not be allowed to suffer unnecessary pain when an agent exists which would relieve it, as electricity.

Other Papers Read.

The following papers were also read: "The Correction of Flatfoot," by Dr. H. McIntosh, Boston; "Report of Cases of Electrochemical Minor Surgery," by Dr. E. S. Smith; "Anterior Poliomyelitis," by Dr. H. W. Frauenthal, New York; "Employment of the Caldwell Cavity Tube as a Surface Electrode," by Dr. C. R. Dickson, Toronto; "Treatment of Arteriosclerosis and Hypertension," by Dr. W. B. Snow, New York; "Physiotherapy in the Practice of Medicine," by Dr. W. D. McFee, Haverhill, Mass.; "Electricity in Errors of Refraction," by Dr. S. J. Harris, Boston; "Roentgen Ray Diagnosis of Bone Diseases," by Dr. M. K. Kassabian, Philadelphia; "X-Ray in Dental Examination," by Dr. S. Tousey, New York; "Treatment of Varicose Veins and Varicose Ulcers," by Dr. H. Finkelspiel, Pittsburg, Pa.; "The Physiologic Action and Therapeutic Effect of Vacuum Tube Discharges," by Dr. J. H. Burch, Syracuse, N. Y.; "The General Practitioner His Own Radiographer," by Dr. E. G. Edwards, La Junta, Colo.; "The Five Hundred Candle Power Incandescent Lamp," by Dr. S. T. Birdsall, Glens Falls, N. Y.; "So-Called Chronic Rheumatism, or Septic Arthritis," by Dr. J. W. Torbett, Marlin, Texas.

SOUTHERN MEDICAL ASSOCIATION.

Second Annual Meeting, held at Atlanta, Ga., Nov. 10-12, 1908.

(*Continued from page 1805.*)

Protection As a Therapeutic Principle.

DR. I. I. LEMANN, New Orleans: The purpose of this paper is to review a number of methods adopted in the modern treatment of diseases of various organs, and by showing that one basic principle underlies them all to point out a direction in which fresh deductive reasoning may indicate new methods for the treatment of other conditions. The basic principle referred to is that of protection or rest for the damaged organs as opposed to the idea of stimulating or spurring them to renewed effort. This is illustrated in the modern treatment of heart disease, diseases of the kidneys, diseases of the blood making organs, diseases of the gastrointestinal system, and in diseases of the respiratory system. It is not intended to convey the idea that protection is the sole logical therapeutic principle, but it is a principle which must rank amongst the chief ones.

DISCUSSION.

DR. G. S. BEL, New Orleans: I have had a great deal of experience in the rest treatment of diseases of the heart, and I heartily recommend it. For example, I have seen any number of patients with dyspnea resulting from incompetency who, when placed at rest, in a few days were breathing easily, without the use of digitalis or strychnin.

Diagnosis of Perforation in Typhoid Fever.

DR. C. W. STRICKLER, Atlanta, Ga.: For successful treatment an early diagnosis is essential, but that is frequently one of the most difficult problems. The classical picture may be so nearly simulated as to lead the best diagnosticians into error. To weigh and value the indefinite symptoms that confront us in atypical cases, requires sound reasoning, diagnostic skill and clinical experience. There are some cases that no one is able to recognize. The diagnosis is made still more difficult when we remember that any or all of the subjective and objective symptoms may be present and yet no perforation exist. Opium should not be administered in the course of the disease. During the third and fourth weeks a daily blood count should be made, and if symptoms indicating perforation occur a blood count should be made every hour. A careful physical examination should be made, particularly with reference to the area of liver dulness. The slightest abdominal pain should receive attention. A careful study of the patient's expression each day is essential.

Aspirin in 123 Cases of Typhoid Fever.

DR. E. V. BOECKH, Atlanta, Ga.: In 1907 a typhoid patient suffering with severe pain in his back was given a dose of 10 grains of aspirin (acetylsalicylic acid). In addition to relieving the pain, it was noticed that the temperature and pulse dropped markedly. Following this 10 out of 18 patients in a ward were given simultaneously 3 grains of aspirin every 3 hours during the day and at night if the temperature reached 103 F. In other instances 5 grains of aspirin, combined from ½ to 1 grain of caffein citrate, was given. If a temperature of 103 F. or over did not respond to the aspirin a sponge bath was given. Among these 10 patients, an average of less than one a day required sponging for continued high temperature. Aspirin was also given in other parts of the hospital at the same time. The results in our last epidemic form an argument so favorable to the use of aspirin that those who took part in the treating of this series of cases will hereafter not only prefer this drug as an antipyretic in cases in which the bath is contraindicated, but feel justified in continuing investigation in some cases which show no contraindications to baths.

Discussion on Typhoid Fever.

DR. I. I. LEMANN, New Orleans: In a case recently reported, on two occasions there were symptoms of perforation, but these disappeared after the passage of a large amount of gas from the bowels.

DR. GEORGE DOCK, New Orleans: I think that the importance of pain and the alteration of the liver dulness is often overlooked. When a blood count can not be made, the examination of a fresh drop daily will give much information to the trained observer. Some of the conditions that simulate perforation are just as dangerous; for instance, perforation of a necrosed mesenteric gland. It is a strange fact that appendectomy during the course of typhoid in some of the reported cases seemed to make the typhoid less severe. I have not used aspirin in typhoid, but in the early days I used salol. The use of anypyretic drugs in typhoid has been practically abondoned, and I do not see any advantage of aspirin over other antipyretics. I prefer the cold bath treatment.

DR. J. S. TODD, Atlanta: The diagnosis of perforation is such an unsatisfactory thing generally that I want a surgeon immediately. I have used aspirin, and I do not know that it has any advantages. The majority of my patients do not like the cold bath. If cold sponging can not be used, I use some of the antipyretics and guard them with strychnin or caffein.

DR. WILLIAM KRAUSS, Memphis, Tenn.: The classical symptoms of perforation are those of a moribund patient, and when we had an operative mortality of 90 and 95 per cent. it was when we waited for the classical symptoms. The average mortality is now about 65 per cent., though some physicians have had as low as 35 per cent.

DR. F. C. MOOR, Tallahassee, Fla.: My experience has been that in the cases in which the coal-tar drugs did good if they were omitted the temperature was not excessive anyway, and when the temperature was very high, very large doses had to be given and the depressing effect was very decided. In 90 per cent. of cases I believe that it is possible to carry out some form of hydrotherapy, and the strict Brand method is valuable in children.

DR. J. A. WITHERSPOON, Nashville, Tenn.: I think we fail to take into consideration that typhoid is largely a self-limited infection, and I believe that all coal-tar derivatives and opium (except possibly in hemorrhage) are absolutely contraindicated. The principles of treatment in typhoid should be to conserve the patient's vitality and to eliminate the toxins, and any treatment that depresses and lowers temperature temporarily markedly decreases the vital forces and in my judgment is contraindicated.

DR. H. M. FOLKES, Biloxi, Miss: Out of some 140 cases of typhoid fever I have had but one case of perforation, and in that case there was sudden extreme pain. I would like to know to what extent that symptom has been observed.

DR. W. S. THAYER, Baltimore: I think a blood count is very important at the time of perforation. It is impossible, however, for every practitioner to make a blood count, but I would lay stress on the importance, under such circumstances, of examining fresh specimens of the blood. I agree with Dr. Dock and Dr. Witherspoon regarding antipyretics. It is more than forty years now since the cold baths were first employed, and that method has produced an enormous change in the statistics of typhoid fever.

DR. THAYER: I have not seen any relative increase in the polymorphonuclears in perforation. The leucocyte count is simply a straw in making the diagnosis of perforation, and can not be relied on alone. There is a great difference of opinion as to the use of morphin. I never use it except in hemorrhage. Especially when there is diarrhea with the hemorrhage, I think the lead and opium pills the best.

DR. C. W. STRICKLER: I had the opportunity of watching Dr. Boeckh's series of cases. I took the blood pressure in one of the cases, and there was no lowering of blood pressure after the use of the aspirin. If we are going to use any of these preparations aspirin is probably the safest.

DR. E. V. BOECKH, in closing: I was evidently misunderstood, as it was never my intention to put any drug ahead of hydrotherapy in typhoid. My only claim was, that it seemed from the cases observed when baths were contraindicated and in which it was necessary to give an antipyretic drug, that aspirin was the least harmful of any that we possess.

Prophylaxis of Malaria.

DR. W. S. THAYER, Baltimore: We know the life history of the malarial parasite, and if its cycle could be broken at any one point malaria would be eradicated in that particular community. There are three ways of accomplishing this, namely, mosquito reduction, protection of individuals from mosquitoes, and the destruction of the parasites in the human host. The *Anopheles* breeds especially in marches, in shallow collections of water occurring under natural conditions, in ruts, in places which have been dug up in the ground. The problem of the removal of the breeding places of *Anopheles* mosquitoes means the thorough and complete drainage everywhere about the affected region, and the clearing up of all standing water. The use of oil on water where mosquitoes breed is at best only a makeshift, and not nearly so efficient as clearing up and draining the breeding places. The second method of breaking the cycle is to protect the individual from the bite of an infected mosquito, and under this head is included the protection of the patients already infected from the bites of mosquitoes. But patients suffering from malaria can not often be confined to the house. However, in malarial districts every house should be screened, as well as the beds, porches, etc. The third way of breaking the cycle is by the destruction of the parasite in the host by the use of quinin. For prophylactic purposes, the Italians use small doses frequently repeated, instead of large doses given less frequently. Wherever possible they have carried out a mixed prophylaxis, personal protection, as well as quinin prophylaxis; and they have succeeded in reducing the number of cases of malaria enormously.

DISCUSSION.

DR. J. H. WHITE, New Orleans: From my own knowledge I can testify to the truth of Dr. Thayer's statement that the real solution of malarial prophylaxis is drainage. Oiling is simply a makeshift, and never can be anything else, because it has to be done at intervals, like the giving of quinin, and will be forgotten. I have found that, in addition to screening the houses, it is necessary at regular intervals to fumigate those houses, because through carelelessness mosquitoes will get in when the doors are opened. This fumigation is not a serious task and should be repeated every seven days.

DR. VICTOR H. HEISER, U. S. Public Health and Marine-Hospital Service. In sections of the Philippines people died at certain seasons of the year by the thousands. In these sections quinin in large quantities was distributed gratuitously by the government, and now it is rare for a death to occur there from malaria.

DR. S. T. RUCKER, Memphis, Tenn.: One important thing has been omitted, and that is the administration of calomel preceding the quinin. I am convinced that the mosquito is the chief infecting agent in malaria, but I doubt if it is the only one. I have seen malaria with chills and fever in February. I would like to ask Dr. Thayer how long the malarial plasmodium can live in a healthy individual without any physical manifestations.

DR. WILLIAM KRAUSS, Memphis, Tenn.: One of the difficulties of screening is that the screens in general use, No. 12 mesh, will allow the mosquitoes to pass through readily. We should teach the public that these insects are the carriers of the infection. It is probably not necessary to get rid of all the mosquitoes, for Colonel Gorgas has shown with reference to yellow fever that the disease dies out before all the mosquitoes disappear.

DR. T. A. CASEY, Birmingham, Ala.: I want to emphasize the fact that the mosquito is the sole carrier of the disease. I still find that many physicians in the south believe as Dr. Rucker just said, that the mosquito is not the only source of infection. When we consider its cycle of development, in the body of the mosquito and then in the human subject, and if one link in the chain is broken the disease will be prevented, I think the question is at once answered.

DR. H. L. SUTHERLAND, Rosedale, Miss.: An important matter is to screen the malaria patient until you get him thoroughly under the influence of quinin.

DR. I. I. LEMANN, New Orleans: In New Orleans it has been found that the *Anopheles* mosquito breeds in the swamps back of the city and along the walls of the river front where small quantities of water may collect. In this way it was found that the city was practically surrounded by the breeding places of this form of mosquito. On the other hand, the *Culex* and the *Stegomyia* breed only in the center of the inhabitable portion of the city. These conditions correspond exactly with our clinical experience.

DR. J. A. WITHERSPOON, Nashville, Tenn.: Until a national bureau of health is established, with sufficient mony and sufficient men of scientific attainments, of course these great problems of prophylaxis must be carried on in a rather unsatisfactory way, but when that is established I feel that most of these infections can and will be controlled. The great danger of infection is from the patients who are walking around and can not be screened. But the trouble is that we stop giving quinin too soon. If the quinin be continued long enough, then we will get rid of the latent infections, and in consequence will have less malaria.

DR. D. L. WILKINSON, Montevallo, Ala.: What we want and need more than anything else is education of the public, and physicians will be compelled to carry that on until a bureau of health is established to carry out these measures for us. And in that effort it strikes me that one of the best measures is that adopted a year or so ago by the Shelby County Medical Society. Four good lecturers were secured and public lectures were given on the prevention of malaria,

typhoid and tuberculosis, and on some other question of preventive medicine. In some parts of the country streams are being reforested, and I would like to ask how, in these new areas, we can prevent reinfection.

DR. GEORGE DOCK, New Orleans: Late return of malarial fever has long been known. I have seen patients coming up from Central America in the fall become ill in February, March and even in April, in places where there was no malaria. It has also been shown that spring malaria often comes out a couple of weeks after those mosquitoes that have been fairly quiet during the winter begin to move around. I have frequently seen that in Michigan. I would go farther than Dr. Witherspoon and keep these patients on quinin all winter, and in this way prevent a return.

DR. W. S. THAYER: It is not known how long the parasite can live in the human host, sometimes probably for years. There are no accurate observations for a longer time than two years. The question of reforesting streams will have to be determined very much with regard to the particular locality. I would question whether it would tend to increase the malaria to any great extent. I am not sure just how far a mosquito can be carried by the wind, but probably not more than two or three hundred yards. The length of treatment is an extremely important matter, and I can only second what Dr. Dock has said. Ross advises three months' treatment in every case of malaria. It has been my habit to treat a patient fairly vigorously for two or three weeks, and then ask him to take two grains of quinin three times a day for from three to six weeks, but I am inclined to think that he ought to take a large dose, say six grains a day in divided doses for about three months after infection. I do not think very large doses are necessary, except in the malignant cases. It has been shown that the accumulation of quinin is just as much after small doses as after very large ones. It is important to remember that the quickest way of getting quinin into the blood is intravenously, next by the mouth, and that the slowest way is hypodermically.

(To be continued.)

NEW YORK NEUROLOGICAL SOCIETY.

Regular Meeting, held Oct. 6, 1908.

The president, DR. B. SACHS, in the Chair.

The Seat of Consciousness.

DR. FREDRICK PETERSON: Psychologists, metaphysicians, physiologists and physicians have written a great deal concerning consciousness, but if they have said anything of any great significance it has eluded my observation. The most tangible thing that I have been able to grasp in my reading is that consciousness is a stream, a flow, a flight, a current, a thread, an "orderly succession of changes." I take it for granted that whatever consciousness may be it has a seat. It has been assumed that if the body be removed portion by portion, first the legs and the arms, and then the trunk as far as the base of the skull, that consciousness, if the circulation and oxygenation be kept up, still persists in the head, and that its seat is in the brain. Such an experiment, in effect, has often been performed for us in broken necks and other spinal-cord lesions. Those who have dared to surmise further have intimated that consciousness is diffused throughout the brain, or even that it is an attribute of the cortex of the brain alone. In my opinion, the seat of that power which produces the manifestations of consciousness is in the basal ganglia (probably the corpora striata), and consciousness is a peculiar summation of energy at that point, capable of being directed like the rays of a searchlight into this or that portion of the brain. The daily physiologic variation of consciousness in the condition of sleep is certainly a reduction in consciousness from the highest summation of energies to some lower level. Sleeping and waking may be observed in a vast group of animals that have little or no cerebral development. Furthermore, the phenomena of sleep are observed in new-born human infants, despite the fact that the cerebrum is empty of experience and anatomically still much undeveloped as to its connections with the rest of the brain. They are also observed in children born without a cerebrum, and even in dogs deprived of the hemispheres. In innumerable cases of extensive loss of cerebral substance, of a hemisphere, as in infantile cerebral palsies (a frontal lobe in the crow-bar case, etc.), consciousness itself seemed unimpaired throughout life. These observations seemed to show that consciousness, at least as regards its variations in the condition of sleep, does not reside in the cerebrum. Another argument of a similar bearing is the fact that every individual with a brain stored full of all the experience of a lifetime is only actually awake at any one time around some particular small group of functions or ideas that occupy consciousness.

Passing now to another series of pathologic conditions, the one disorder which has led me to think much of this subject is epilepsy, in which disease loss of consciousness is the most extraordinary and often the only symptom; for example, *tic de salaam* and other forms of *petit mal*, in which the patient drops suddenly to the floor with loss of consciousness, and quite as suddenly rises again in full possession of his faculties. The loss of consciousness is complete and often lasts but a fraction of a second. How can we account for such a phenomenon? If consciousness were a diffused attribute of the whole brain, what spasm of blood vessels or other physical process familiar to us could act and be readjusted with such speed? What portion of the brain is so constructed as to be, apparently, in intimate connection with every other? The corpora striata. There is no part of the brain of which we know so little. As Edinger said, here we have "a mighty portion of the brain that must be of enormous significance; otherwise it would not be always present, from the fish up to the man."

DISCUSSION.

MR. HENRY RUTGERS MARSHALL: A few years ago it would have been a matter of surprise to find such a subject presented for discussion before a body of neurologists, as it would have been considered to belong more particularly to the field of psychology. The thesis is open to discussion, in that it attempts to describe consciousness in terms of energy. We have become more or less accustomed to similar descriptions since the appearance of Ostwald's work, in which he attempted to define consciousness in terms of energy, and since then psychologists and philosophers have been endeavoring to bring meaning into his statements, but without success. The word consciousness, as commonly employed has two diverse meanings. For instance, when we refer to the consciousness of plants, of which Darwin has spoken, we refer to psychic existence, as such. When, on the other hand, we state that we had gone to the theater and met an old friend who so engrossed our attention that we were not conscious of the play, we used the word consciousness with an entirely different meaning. We here referred to a state of "awareness," and that was entirely different from "psychic existence," as such. When we speak of the seat of consciousness we may mean either the seat of psychic sense in man, or the seat of awareness. This latter is probably the form of consciousness to which Dr. Peterson referred. When we inquire as to the seat of consciousness as psychic existence, as such, we deal with a different question. The evidence at our command at present favors a broad and exceedingly general seat of consciousness, as thus considered. In sudden loss of consciousness in an epileptic there is also a momentary paralysis—a sudden cessation of activities. That distinction is important, because it brings into relation with our states of clear consciousness all those states of what are commonly called our "sub-conscious" mental life; those states which might better be called "sub-attentive consciousness."

Waking and sleeping, I believe, are objective signs of the same conditions which from another point of view were described respectively as clear consciousness and the lack of clear consciousness.

PROF. FREDERIC S. LEE: Does consciousness represent a special form of energy or not? I think that most physiologists would hardly agree that consciousness represents energy. It seems to me that the best working hypothesis for the physiologist is that consciousness is something of unknown nature which accompanies the activity of certain brain structures. I do not like

the term "epiphenomenon" to express that idea, but since that is the common and accepted term I would use it. Consciousness, then, is an epiphenomenon accompanying the activity of certain brain structures; or, rather, it is one of the modes of manifestation of their activity, just as chemical, thermal and electrical phenomena were other modes. Consciousness could not put into activity the brain structures. I would not necessarily confine consciousness to the activity of the cerebral cortex only, although I am inclined to believe that it is particularly associated with the working of cortical cells. Bechterew claims that in early life certain parts of the brain below the cortex act consciously, and that as the tracts between these and the cortex become myelinized and functional, conscious activity comes to be pre-eminently associated with cortical activity. On the theory that the corpus striatum works through the mediation of the cortex, how would Dr. Peterson interpret the behavior of one of Goltz's dogs, from which the cortex had been entirely removed?

DR. ADOLF MEYER: Dr. Peterson's thesis brings back to us the proposition which Dr. P. Carus advanced about thirteen years ago in the *Journal of Comparative Neurology*, based largely on the argument that the corpora striata formed a large, bulky part of the brain to which no other function could be assigned. Gaule in turn assigned the function to the optic thalamus. Ignoring entirely the question of what we meant by "consciousness" as a positive function, it seems that the evidence that Dr. Peterson has presented could best be summed up as evidence of vulnerability of mechanisms of consciousness by a lesion in the basal region. It is evidence in favor of the possibility of localizing the lesions in some types of unconsciousness. As soon as we try to make positive inferences, *i. e.*, as to the "seat of consciousness," we are bound to meet a number of difficulties, and one of them is this: contrary to Dr. Peterson's assumption, the corpora striata has relatively very obscure connection with the rest of the brain. This is one of the greatest stumbling-blocks to the theory advanced that the corpora striata should be of such fundamental importance. So far as we know, its connections with the cortex are extremely scanty, and with the rest of the base its connections are essentially those with the hypothalamus. On anatomic grounds alone it would be difficult to explain any connection with the corpora striata and the "seat of consciousness," leaving out of consideration the question whether or not the "seat of consciousness" could be a safe problem to-day.

DR. SMITH ELY JELLIFFE: In very general terms, consciousness might be regarded as the in-streaming of all the sensory functions, and with the cutting off of the sensory or perceptive functions, a loss of consciousness follows. To illustrate that point we need not consider the effect of an anesthetic, because in alcohol we have an agent, *par excellence*, which cuts off, one by one, the different sensory perceptive functions, little by little, until we have a non-conscious recidua. So far as the seat of consciousness is concerned, the corpora striata simply acts in the capacity of a cut-off by reason of the anatomic distribution of the fibers in that region. Instead of being the seat of consciousness, I look on it as a gateway through which the fibers pass, and any injury in that area would be apt, therefore, to have a widespread effect.

THE SERUM DIAGNOSIS OF SYPHILIS IN ITS RELATION TO NERVOUS DISEASE.

The Development and Character of the Wassermann Test.

DR. C. F. BOLDUAN: The Wassermann reaction, briefly outlined, is as follows:

Two tubes are prepared with the following contents:

Tube 1.—Extract of the liver and spleen of a syphilitic fetus, representing the syphilitic organism (or antigen), plus serum to be tested.

Tube 2.—Red blood cells of sheep or other animal, suspended in normal saline solution, plus serum of a rabbit which has been immunized to the particular red blood cells used.

Complement (a substance necessary to all immune reactions, which existed in the fresh serum of all animals) in the shape of fresh normal guinea-pig serum, is added to Tube 1 and allowed to stand. At the end of half an hour the content of Tube 1 is added to that of Tube 2. If the serum in Tube 1 came from a syphilitic individual, its relation to the extract of antigen is a specific one, and complement will be absorbed thereby; so that, when the contents of Tubes 1 and 2 are joined, no hemolysis of the red blood cells in Tube 2 will take place. If the serum is not from a syphilitic, complement will not be absorbed, but will remain active to cause hemolysis in Tube 2. Hemolysis is observed in the test tube as a tingeing of the whole field with a transparent red color. The red corpuscles have been disintegrated and the hemoglobin liberated. In the absence of hemolysis the solution of red cells remains turbulent and opaque. The test, of course, involves numerous controls and a careful standardizing of the hemolytic serum and of the syphilitic extract.

Technic of the Wassermann Reaction: Its Practical Application with Reference to Diagnosis, Prognosis and Treatment of Nervous Disease.

DR. E. CASTELLI:

1. From the social standpoint, the serum diagnosis of syphilis represents one of the greatest achievements attained by medicine at the present time. The rôle played by syphilis in the life of mankind requires no explanation. The highest coefficiency to degeneracy and insanity is created by syphilis.

2. If we were now in a position to tell our patient that notwithstanding his previous syphilitic infection he could marry and create a healthful progeny we would certainly have at our command a tremendous factor for benefiting a large proportion of our fellow beings.

3. If we could establish the fact that syphilis is curable, and did not hang like the sword of Damocles over a man's physical and mental future, again medicine would triumph.

4. From a legal standpoint, the fact that we might be able to aid either the prosecution or the defense with the knowledge that the criminal had a claim on the court's leniency by reason of a previous syphilitic infection, which had produced a derangement of his mental poise, might become an important factor in the administration of justice.

5. The serodiagnosis of syphilis would be a means of differential diagnosis during the pre-paralytic stage, when the general symptoms were indefinite and generally masked by a well-defined neurasthenic syndrome. The differential diagnosis between general paralysis and neurasthenia during this period would represent the real prophylactic warning. The patient, during this pre-paralytic stage, is dangerous to himself, his family and to society at large, and our early recognition of the condition makes possible the safeguarding of the patient.

6. While the serodiagnosis of syphilis in its present condition is not perfect, and owing to its complicated technic and to the difficulty of procuring the necessary ingredients it is limited to a few privileged students, yet it has the indisputable advantage of furnishing us with a rich amount of positive diagnostic data, and I consider its adoption in the various hospitals and medical institutions not optional, but absolutely necessary.

Demonstration of Wassermann Reaction Test.

DR. NOGUCHI, Rockefeller Institute: After demonstrating the Wassermann reaction, Dr. Noguchi showed briefly a reaction evolved by him during some experimentation with the various albumin reactions in the spinal fluids of general paralysis and other disorders. This was obtained as follows: 1 c.c. of the spinal fluid to be tested is placed in a test-tube whose diameter is 1 cm. or less. To this is added 5 c.c. of a 10 per cent. solution of butyric acid. The tube is then heated until the fluid is bubbling, and while still hot 1 c.c. of a normal (4 per cent.) solution of sodium hydrate is added. In nearly all spinal fluids and opalescence or cloud occurs, but in the spinal fluid of general paralysis the cloud soon separates into a definite flocculence which is characteristic. The flocculence usually appears in a few moments—rarely requiring more than twenty minutes. The reaction has the advantage of being positive in a quantity of 1 c.c. or less, and of being a qualitative as well as a quantitative test. What the flocculence may mean is not known, but it may consist of some globulin fraction which is found only in syphilitic or meta-syphilitic disorders of the nervous system. That the reaction is not entirely quantitative

is shown by the fact that many fluids from nonparalytic patients give much richer clouds than those from paresis patients, but the clouds do not flocculate.

Discussion on Serum Diagnosis of Syphilis at Ward's Island.

DR. J. W. MOORE, State Pathological Institute, Ward's Island: So far, 80 cases have been tested at Ward's Island by the Noguchi method; 50 undoubted cases of paresis gave 48 positive results. The 2 negative cases did not seem peculiar in any way. Of 3 cases of cerebral syphilis, 2 gave positive reactions. Of the nonparalytic cases tested, 5 were alcoholic psychoses, 2 manic-depressive cases, 1 paranoic state, 1 imbecile and 1 case which was diagnosed as Karsakow's delirium, but which proved at autopsy to be due to a fractured skull with extensive diffuse dural hematoma. Only 1 of the non-paralytic cases gave a positive reaction. This was a case, diagnosed as dementia præcox, with, however, increased knee-jerks and speech defect. In 5 doubtful cases there were 2 positive results and 3 negative. In the majority of cases of paresis the Wassermann reaction was also carried out. Four cases of general paralysis which were negative to the Wassermann test were positive to the other. Four gave the Wassermann reaction much less definitely than did the Noguchi reaction. In no case was the Wassermann test the more conclusive of the two. In two of the cerebral syphilis cases in which it was tried it gave a negative result.

DR. B. ONUF: Dr. Castelli states that in a large percentage of cases of general paresis—70 or 80—the Wassermann reaction was positive, and also in about 60 per cent. of cases of senile dementia. Can we conclude from that that senile dementia is simply a late form of general paresis? Does syphilis produce a rather rapid exhaustion of the nervous system, while in senile dementia identical changes occurred in a longer course of time? Does Dr. Castelli mean to identify senile dementia with general paresis?

DR. BOLESLAW LAPOWSKI: On account of the technic of the Wassermann reaction and the material and control experiments that it involves, it will always remain a laboratory test. By terming it the "Wassermann reaction" we are inadvertently doing an injury to others who laid the basis of the reaction. Wassermann simply substituted dissolved substances of bacterial extracts of organs instead of emulsions of bacteria, but the basis was the fact discovered by Bordet and Gengou, and to them at least some credit is due. The test is of undoubted value in corroborating or establishing the diagnosis of latent syphilis, but even then it can not always be relied on, and in dealing with primary or secondary syphilis it is not necessary.

DR. B. SACHS: While the Wassermann test can not be made at the bedside, its technic is not difficult and can easily be acquired. For the present, of course, this test, like many others, will be restricted to the laboratory and has to be made by persons specially qualified along those lines. So far, the reaction has been practically limited to cases of suspected tabes or general paresis, but at the Mt. Sinai Hospital an effort is being made to employ it in other doubtful spinal or cerebral cases in which syphilis is suspected.

INTERNATIONAL CONGRESS ON TUBERCULOSIS.

Held at Washington, D. C., Sept. 28 to Oct. 3, 1908.

(Concluded from page 1813.)

SECTION H.—CLINICAL STUDY AND THERAPY OF TUBERCULOSIS (CONCLUDED.)

Hygiene of the Mouth, Nares, Pharynx, Intestines, Skin, Mucous Membranes, Lymphbodies, Lungs; Prevention of Colds.

DR. NOBLE P. BARNES, Washington, D. C.: Hygiene of the mucous membrane is essential to the cure and prevention of disease. Only by free drainage and free air space in the nasal cavity can we hope for relief and cure of ear disturbances, recovery of diseased pulmonary and gastrointestinal mucosa or arrest and non-recurrence of a tuberculous process. In practicing lung gymnastics never expand the chest beyond the degree of comfort for fear of tearing open old wounds or rupturing air cells, and expel the air through the nose instead of the mouth or puckered lips, as practiced by most teachers of physical culture. The turbinates are cooled by inhalation, warmed by exhalation, and dust caught on the nasal hair and mucous membrane will be blown out instead of drawn further in. The digestive tract as a route for tuberculous invasion is of first importance in infants and young children. The pasteurized milk and other sterile foods are "love's labor lost" unless the many other methods of infection are recognized and eliminated. Pacifiers are disease-carrying articles that deform the mouth, produce adenoids, and create the sucking habit that is still observed in gum-chewing, nail-nibbling adults. The expressions, "catching cold," "cold in the head, chest and back," mean nothing to the trained mind. If the mucous membranes are free, open, well-drained and healthy, there will be no army of organisms waiting for a lowering of resistance by exposure to atmospheric changes or fatigue or hunger to operate in the production of a rhinitis, bronchitis, tonsillitis, or rheumatism. To prevent "colds," observe the proper hygiene of the skin and mucous membrane, avoid fatigue, long hunger, dust, bad air, mufflers and chest protectors. No exercise in the play park can overcome the injury from studying in foul air in school rooms or sleeping in closed apartments, nor can fresh air and good food overcome disease caused by defect. The new hygiene should be taught in the schools, not that about the effects of tobacco and alcohol, but that the avenues to infection are through the skin and mucous membranes, and that these structures must be kept clean and healthy.

Isolation of Poor Consumptives in General Hospitals.

DR. M. LETULLE, Paris: Patients with "open tuberculosis," admitted to hospitals for general diseases, must be isolated. "Measures of collective preservation" must be carried out in such a manner as not to injure the poor consumptives who entrust their health to our keeping. The treatment of tuberculous patients in a hospital must be not only "hygienic and dietetic," and as completely so as in a sanitarium, but also moral. It is, therefore, absolutely necessary in curable cases to secure to the consumptive the joy of living and the hope of recovery. Consumptives admitted to general hospitals must be divided into three distinct administrative classes, without daily communication, so as to secure complete isolation: (1) Early cases (without expectoration); (2) open cases, considered curable, and suitable for sanitarium treatment; (3) "chronic consumptives," who merely require humane care and treatment. This division into three classes must be made as early as possible. With that end in view, every patient suspected of pulmonary tuberculosis must be isolated in a separate room immediately after his admission, until the medical diagnosis has been definitely made.

Rest of the Lung in Pulmonary Tuberculosis.

DR. NORMAN BRIDGE, Los Angeles, Calif.: The tuberculous lung should be kept as still as possible, especially if the disease is unilateral. There are numerous arguments in favor of this view; it is the nearly universal opinion in tuberculosis of other organs, to keep the part as still as possible and I can discover no reason for making an exception of the tuberculous lung. Immobilization relieves symptoms and helps toward recovery. Violence to a wound retards healing and increases scar tissue. Analogous things happen to the tuberculous lung. Violent coughing and lung gymnastics may disseminate the disease in the lung. Stretching the diseased tissue is liable to injure it. The Bier method of passive congestion doubtless tends to retard numerous diseases and helps toward recovery. It is more effective in a lung that is kept still. Artificial immobilization in unilateral cases always seems to help the lung toward recovery; so does pleural effusion of serum. Cough to expel phlegm from the air passages is not important, but much cough is harmful. Pus in the windpipe or bronchial tubes is absorbed into the system very little and does little if any harm. Hence, to suppress cough by will power or even mild drugs is useful. The right view of this subject must be reached by analogy and good sense, for statistical records are hard to make. The difficulty lies in the great number and va-

riety of the natural and spontaneous movements of the lungs, which vary widely in different patients. It would require at least 1,200 patients, under observation for a year each, by an accurate and judicially minded observer, before any sharp generalization could be made. No such test has been made or is likely to be. Analogy and a due sense of proportion requires that a tuberculous lung should be kept as still as possible.

Ten Years' Experience in Sanatorium Work.

PROFESSOR GOTTHOLD PANNWITZ, Berlin, discussed (1) his experience with regard to the construction and arrangement of sanatoriums; (2) his administrative experience; (3) the results of treatment; (4) the supplementary measures before and during sanatorium treatment; and, finally, (5) his special experience in children's sanatoriums:

An important lesson, which has been learned by experience, is that the rest-cure in a sanatorium must be followed by a period during which the convalescent engages in some light agricultural occupation (occupation-cure), so that he may again become accustomed to regular manual work and thus render the results of treatment more permanent. The medical treatment, besides the general hygienic and dietetic measures, should include the use of tuberculin, administered with strict regard to the individual and with the greatest caution, so as to avoid producing any reaction. The results of the tuberculin treatment are becoming more and more satisfactory. The most important adjuncts to the free sanatorium are the convalescent camps or homes, a general supervision of living conditions by social workers from the supporting dispensaries, the rendering of assistance to patients' families, and finding work for convalescents.

In children's sanatoriums special stress should be laid on the educational feature. These institutions should be arranged on the simplest hygienic plan, in order to avoid getting the children accustomed to comforts which, for want of means, can not be supplied in their own homes. Light and air, plenty of soap and water, but in the simplest imaginable form, are supplied, and the children are constantly taught the simplest rules of hygienic living—how to sleep, breathe, chew, harden the body, keep clean, and take exercise. A sanatorium for children must have some farming facilities, so that, after the rest-cure of several weeks, the child may continue to live in the open air for some time and engage in gardening or other outdoor occupation, and thus render the results of treatment more permanent.

Cost and Maintenance of Sanatoria, with Special Regard to Institutions Operated by Life Insurance Associations.

DR. RICHARD FREUND, Berlin: Tuberculosis sanatoria must be developed into special hospitals for tuberculous patients. They must be massively built and must be adapted for use during the whole year. The interior arrangement must be planned to allow the maintenance of perfect cleanliness. In building these sanatoria only the best materials are to be used and equipment should be installed with greatest care. Such a plan of construction will save expensive repairing and renovating and make certain the permanence of the institution. The most expensive is the cheapest. The rooms should be furnished in the simplest manner, every luxury is to be avoided, yet care should be taken that the sanatorium presents an air of comfort and is inviting. In order to secure the best quality of food with the lowest possible average cost per inmate, each sanatorium should have its own farm near by, which supplies the sanatorium, and on which also tuberculous patients might find occupation.

Graduated Labor in Pulmonary Tuberculosis.

DR. M. S. PATERSON, England: The idea that work is to be employed in every case and at all times is erroneous. The system of graduated labor at Frimley Sanatorium begins with almost more extreme rest than in any other sanatorium. In conjunction with Dr. Inman I have shown by the opsonic index that exercise has a definite effect on the blood in pulmonary tuberculosis. It also influences the temperature. Influence on blood and temperature I believe to be due to toxins produced at the site of lesion or autoinoculation (Wright), when the toxin reaches the blood and lymph stream. Persistence of this fever and the state of the blood leads to the death of patient; absolute rest is necessary to prevent this. Patients with temperature even of 99 F. by mouth and with headache are sent to bed; they are not allowed to wash themselves or to go to the lavatory. Every possible means is used to stop cough not productive of sputa. Graduated exercises are begun later and careful watch kept on temperature. The patients' work is gradually increased under constant supervision until such time as they can perform the heaviest work without rise of temperature. Chief indications of autoinoculation are: 1. Loss of appetite (usually meaning too hard work); 2, a patient is seen to do his work as if it were an effort; 3, an irregular swinging temperature always below normal; 4, a temperature of 99 F. in early cases in men; 5, a temperature of 99 F. and headache.

Treatment of Tuberculosis in the Patient's Home or in Other Places than Sanatoria.

DR. CHARLES L. MINOR, Asheville, N. C.: The hygienic and dietetic treatment is now universally recognized as a fundamental part of any and all rational treatment of pulmonary tuberculosis. This method has usually been most carefully applied in closed sanatoria, and it has been supposed that it could only be satisfactorily carried out in such institutions. But, granted sufficient care and pains, this sanatorium treatment, as it is often called, can be as well applied outside such places. The essential features of this method as to their adaptability outside of sanatoria are: 1, Careful personal medical oversight, strict discipline and close supervision; 2, thorough instruction; 3, systematic and hygienic arrangement of the patient's life; 4, effect of the example of other patients and of the *esprit de corps;* 5, nursing; 6, proper housing location and feeding; 7, suitable climatic conditions. All are obtainable unless the patient is handled alone in his own home, when the features mentioned under 4 are missing, or unless he is so poor that those under 7 can not be had. The handling of the very poor, ignorant and criminal is a sociological question, more than a medical one. Handling a chronic disease like pulmonary tuberculosis calls for different methods than those applicable to the ordinary acute disease. The former call for much more detailed work and closer personal relations, and unfortunately chronic cases are often by the profession regarded as uninteresting and tedious and unfruitful of results, a very erroneous view.

Treatment of Tuberculous Patients in Their Homes and Places Other Than Sanatoria.

DR. THOMAS D. COLEMAN, Augusta, Ga.: This is a question of the greatest importance to the individual, the family and society because the greater number of tuberculous patients must be treated in their homes, because of personal choice, individual necessity and the scarcity of suitable sanatoria, in comparison with the number of tuberculous sufferers. It is not to be confounded with the climatic treatment or an entire change of climate in the affected, whether the treatment be carried out in a sanatorium or suitable private home or boarding place. As rigid discipline and as intelligent medical oversight may be carried out in the home as in the sanatorium. The location of the home must be considered, with reference to altitude, soil, sunshine and shade, shelter from winds, location and general equipment of the room with reference to the home and surroundings, hygienic and dietetic routine, specific treatment, and the treatment of the symptoms.

Diagnostic Value of the Cytologic Examination of Tuberculous Effusions in the Various Serous Cavities.

DR. A. CADE, Lyons, France: The cytology of effusions (Widal) requires a simple and easy method of examination and is of considerable aid in determining the nature of a pleurisy. A great predominance of lymphocytes is a strong argument in favor of tuberculosis. There is no danger of making a mistaken diagnosis of tuberculosis on the strength of the cytologic findings in a pleural effusion; the only risk is that the condition may be mistaken for something else, as abnormal formulas are by no means exceptional. The anomalies of the cytologic formula are susceptible of various explana-

tions, but some of these anomalies are still mysterious. The cytology of tuberculous effusions in other serous cavities has a questionable semeiologic value. We must except the great predominance of lymphocytes in tuberculous ascites, an occurrence which, however, is by no means common. In general, cytologic findings must be interpreted with caution, they often need to be controled by other laboratory examinations, and should always be compared with the data obtained by clinical observation. The foregoing conclusions are the result of numerous observations made during the past seven years in the laboratory of my clinic, most of them with the collaboration of Dr. Barjon.

Tuberculous Rheumatism and Inflammatory Tuberculosis.

PROFESSOR ANTONIN PONCET, Lyons, France: My researches during the past ten years have established the existence of articular and non-articular tuberculous rheumatism. This last comer among the infectious rheumatisms should be placed in the front rank, as it is the most common, and its frequency is explained by the prevalence of tuberculosis. The various forms of tuberculous rheumatism range from the acute forms (acute and subacute articular rheumatism) through all the intermediary grades to the chronic forms (nodular, deforming, ankylosing articular rheumatism). As a rule, the articular lesions do not exhibit the characteristics of classic tuberculosis, such as tubercles, caseous infiltration, etc. (macroscopic features), or tuberculous follicles, giant-cells, etc. (microscopic features), that constitute the characteristic picture to which the term specific tuberculosis may properly be applied. The lesions, on the contrary, are made up solely of inflammatory tissue; hence, the name "inflammatory tuberculosis," which I have given to this variety of tuberculosis. There are accordingly two great varieties of tuberculosis: specific tuberculosis, which has been admirably studied and is well known; and inflammatory tuberculosis, with an insignificant anatomic reaction, purely inflammatory, as in all infections and intoxications. It is this latter form of tuberculosis that I have studied more particularly during the past five years, with Dr. René Leriche. It embraces the attenuated forms of tuberculosis which until that time had not been properly recognized. Its range is no less extensive than that of virulent specific tuberculosis. It attacks all the tissues, all the systems, all the organs, as well as the joints, where its existence was first revealed to us under the form of tuberculous rheumatism. Often it takes the place of the arthritic, fibrous or neuro-arthritic diathesis, etc., terms which are becoming more and more vague and less acceptable because they merely refer to syndromes brought about by the tuberculous virus under a great variety of circumstances.

Tuberculosis in Hospitals for the Insane.

DR. RICHARD H. HUTCHINGS, Ogdensburg, N. Y.: Reports from New York state show that the death rate of the insane in custody is 16.6 per cent., as compared with 10 per cent. among the general population, from tuberculosis. In Massachusetts more than 14 per cent. of the deaths among the insane are attributed to this disease; the Government Hospital for the Insane reports more than 20 per cent. of tuberculous lesions found postmortem; in the St. Lawrence State Hospital active tuberculous lesions have been found postmortem in 14 per cent. of the cases. The frequency of the disease among asylum inmates differs in different parts of the country, being more frequent, in general terms, in the east and least frequent in the newer states of the west; it depends to some extent on (1) the environment of the patient admitted, from crowded cities or rural districts; (2) the conditions existing in the hospital itself, as overcrowding, poor ventilation, and the general standard of care maintained. The frequency of tuberculosis among the different classes of the insane—most frequent among the idle and inactive and those with indoor employment, and least frequent among the patients regularly employed at work in the open air—is supported by an examination of the death rate from this disease in the two sexes. In our asylums the women, as a rule, are employed at domestic and indoor work, while all the garden, farm and outdoor work is performed by men. In New York state during the past eighteen years there have been among the insane in custody 28,106 deaths from all causes; of these 15,242 were men and 12,864 were women. Among the men, 1,463, or 9.5 per cent., died of tuberculosis, while among the women there were 2,596, or more than 20 per cent., died from this disease. The number of insane in whom an actual diagnosis of tuberculosis has been made ranges in various American asylums from 0 to 14 per cent., the average being about 3 per cent. These figures are probably below the truth because of the difficulty in making physical examinations. Where measures are employed to isolate the tuberculous patients there has resulted a diminution in the frequency of the disease. Measures for the prevention of tuberculosis include, besides the ordinary measures for cleanliness, a more critical examination of new patients, employing tuberculin when necessary, with isolation of all infected persons, reduction of overcrowding in wards and dormitories, free ventilation from open doors and windows, daily exercise and employment out-of-doors for both men and women, and sterilizing of all garments and bedding before such are used by a second person.

Rôle of Pleural Adhesions in Sudden Death, Asphyxia, Severe Injuries.

DRS. LACASSAGNE and E. MARTIN, Lyons, France: Pleural adhesions occur in 80 per cent. of cases. They are most frequently of tuberculous origin. Every individual with pleural adhesions is liable to sudden death. Every patient with adhesions falling in water is a doomed man (Lacassagne). Adhesions may aid rapid death in anesthesia or after severe surgical injuries. Their importance is therefore great in general medicine and in legal medicine. They are the more injurious as they are more extensive.

Value of Roentgen Ray Examination in Early Diagnosis of Pulmonary Tuberculosis.

DR. PAUL KRAUSE, Jena: Infiltration at the apices sufficiently extensive to be demonstrated by percussion produces a more or less deep shadow. The *x*-ray examination is superior to physical diagnosis, inasmuch as it shows that in many cases the process is more extensive than was at first supposed. Infiltrations that can not be demonstrated by percussion can often be demonstrated by means of an *x*-ray photograph. Simple catarrhal processes in the early stage can not be demonstrated either by the fluoroscope or by taking an *x*-ray photograph. Later, the apices, owing to the diminished amount of air, appear dark and do not clear up during inspiration. If the case is very important for practical reasons, an *x*-ray photograph should always be made. The level of the apices, which in doubtful cases may be determined by orthodiagraphic measures, is of no importance unless the difference exceeds from 1 to 1.5 cm. The width of the apices has not been sufficiently studied with the *x*-ray to be considered a diagnostic point of any value. Ossification of the first rib is readily demonstrated by means of the *x*-ray, and, after Freund, may be utilized as a sign of early tuberculosis. The normal clearing up of the apices during respiration is often absent on one or both sides in early tuberculosis. Lagging of the diaphragm on the diseased side (Williams' phenomenon) has no diagnostic value. The position of the shadows of the ribs in the *x*-ray picture can only be utilized with great caution, if at all. Changes in the apices are usually not found, but alterations of the shadow at the hilus, indicating the presence of indurated caseous or calcified bronchial glands, or infiltrative processes in the neighborhood of the hilus of the bronchi, is, on the other hand, most important. I have frequently seen the picture of a central pneumonia due to a mixed infection with pneumococci progressing slowly in spite of the disappearance of the fever, and after weeks being recognized as a tuberculous process by percussion and auscultation and bacteriologic examination. The *x*-ray examination should be regarded as coordinate to physical examination, but it has its limitations. It tells us nothing in regard to the etiology of the process. The *x*-ray examination frequently reveals the infiltrative process with a perfection which closely approximates that of the autopsy table. Cavities of every size, from that of a pea upward, whether superficial or deep-seated, as

well as calcified foci, reveal themselves in the *x*-ray photograph. Sources of error arise from the fact that shadows at different depths in the lungs overlie one another. In many cases infiltrative processes of a non-tuberculous origin (tumors of the lung, bronchiectasis, pulmonary abscess, pulmonary gangrene) can be differentiated. In the main, however, the *x*-ray diagnosis merely confirms or completes the clinical findings, and is limited to the detection of differences in density in the lung.

Recognition of Pure Pneumothorax, without Exudate, in Pulmonary Tuberculosis.

DR. HERMON VON SCHROTTER, Vienna, with the aid of tables and radiograms, discussed pneumothorax occurring without exudate in the initial stages of tuberculosis:

In individuals who were formerly apparently well and without any special accident, air enters the pleural cavity. In spite of marked displacement of the mediastinum, the symptoms may be relatively trivial. Similarly, the objective symptoms may be so indistinct or so uncharacteristic that it would be impossible to make a certain diagnosis without the aid of a radioscope or the spirometer. The etiologic connection of the pneumothorax with tuberculosis can only be determined by other investigations or by a careful and prolonged study of the later course of the case. The fact that pleural adhesions are absent and that the air enters into a normal pleural cavity affords the opportunity to study the phenomena of mediastinal displacement, the mechanism of respiration, and the vicarious labor of the unaffected lung, in what might be called its "pure form." It is also possible to follow out by observation or measuring interesting phenomena which as yet have not been sufficiently appreciated. Thus, on the lung whose maximal retraction is toward the hilum, the phenomena of pulsation can be demonstrated. One can also study the change in the size of the lung during respiration, the lung capacity and the respiratory gaseous interchange as well as if the one lung had been artificially removed. By means of the radioscope, controlled by the simultaneous employment of the spirometer, one can study the course and rapidity of the spontaneous disappearance of the pneumothorax, or, what amounts to the same, the re-expansion of the lung. A deficiency in the vital capacity of a patient amounting to from 1,000 to 1,500 c.c., particularly in an individual already studied, of itself permits a diagnosis of (recent) entrance of air into the pleural cavity, even though the remaining physical signs are doubtful. It is of further interest that the above-described condition may recur two or three times in individuals with small, circumscribed apical affections, while only slight variations occur in the manifestations and absorption of the pneumothorax. I have seen four such cases and have been able to study two of them along the lines just laid down. One of these patients still lives and comes at regular intervals for examination. He now shows (one year after the last recurrence of his pneumothorax) definite symptoms of an affection of the left upper lobe which had formerly been completed free. The other patient died after two attacks of pneumothorax. The course of the disease extended over several years and toward the end was rapid, although after the healing of his first attack of pneumothorax definite signs of specific disease of the lung could not be demonstrated. Another man of 23 years may be given as an example of how rapidly the lung, retracted in this manner, may spontaneously re-expand. The whole process covered a period of thirty-three days. During this time the vital capacity, or, what is the same, the volume of the affected lung, increased on an average at the rate of 33 c.c. daily for the first seventeen days, and at an average rate of 58 c.c. during the next sixteen days, until the deficiency, amounting to 15,000 c.c., was entirely made up. In this case the re-expansion of the lung occurred more quickly toward the end of the process—about one and seven-tenths times faster than during the first period. Gaseous interchange was studied on a 17-year-old patient, in whom the consumption of oxygen (patient in bed) during the pneumothorax attack was increased 14 per cent. above the normal. This increase is to be explained by the increased breathing and the increased work of the heart. The ventilation capacity in the cases under discussion was distinctly increased. Several times the per-minute volume was found to average 10.5 L., with the respiratory rate at 22 a minute.

Specific Aids in the Diagnosis and Prognosis of Tuberculosis.

DR. SILVIO VON RUCK, Asheville, N. C.: Of 300 patients at the Winyah Sanitarium whose sputa were negative, subcutaneous diagnostic injections of tuberculin gave positive results in 75 per cent. Of 26 healthy persons none reacted to instillations of 1, 2 and 4 per cent. solutions of alcoholic precipitate of old tuberculin into the same eye. In 23 cured or arrested cases none of the patients reacted. Of 18 tuberculous patients treated with specific remedies six months or longer 31.8 per cent. reacted. Of 34 under specific treatment less than six months 47.06 per cent. reacted. Of 44 not yet treated specifically 65.9 per cent. reacted. The influence of specific medication on the power to react to tuberculin is manifest. Of 67 tuberculous patients tested by v. Pirquet's method with 50 per cent. solution of human tuberculin 44 were positive, 19 negative, 4 doubtful. Of 16 cured patients 12 were positive, 3 negative, 1 doubtful. All these patients had not reacted conjunctivally. Of 24 clinically non-tuberculous 12 were positive, 1 gave a late reaction, 11 were negative. The use of bovine tuberculin, both in the conjunctival and cutaneous tests, side by side with the human, has not yielded results from which any definite conclusions can as yet be drawn. The tuberculin reactions as well as the serum reactions are specific and of definite value in cases in which the diagnosis of tuberculosis is not decisive by other methods. A continuous increase in the agglutinating power is favorable prognostically, but I have not found any prognostic conclusions possible from the tuberculin reactions.

Coagulability of the Blood in Pulmonary Tuberculosis: A Preliminary Investigation.

DR. MYER SOLIS-COHEN, Philadelphia: A study of the coagulability of the blood in tuberculosis has been strangely neglected. Vierordt in 1878 and I myself in 1907 being the only ones to have reported such investigations. Yet the importance of this subject should be evident in view of the frequent occurrence of hemorrhage in this disease and the almost universal use of calcium chlorid for such a complication. Wright's assertion that hemorrhage in typhoid is associated with defective coagulability lends an added interest. One hundred cases of pulmonary tuberculosis were examined, 540 observations being made. The blood was tested according to the method which I have advised. Drops of blood were deposited on the inverted lid of a German stender dish and covered by the dish, which was held in place by a rubber band, the inverted dish being then placed in a pan of water kept at a temperature of 37 C. (98 F.). At intervals the dish was removed and tilted, the drops sagging and becoming tear or pear-shaped on profile view and denser below and clearer above on full view before clotting occurred. When coagulation was complete the drops did not move when seen from the side and when looked at in front were denser in the center or showed an even density. The average clotting time of all the cases was 5 1/6 minutes, being practically the same in the different stages of the disease. The examinations showed that persons with increased coagulability are probably less liable and those with deficient coagulability probably more liable to hemorrhage than patients whose coagulability is normal. Cases examined before and during a hemorrhage gave an average clotting time of 7⅛ minutes before and 4 minutes during the bleeding. Hemorrhage was less severe and diminished more rapidly in cases whose clotting time was short or normal than those in whom it was delayed. Diarrhea and menstruation did not influence the coagulability. Pleural effusion seemed to lengthen the clotting time. Subjects for further investigation are suggested, including the effect of calcium salts on the clotting time of the blood in this disease, both in the presence and in the absence of hemorrhage. Despite the inconclusive character of the investigation due to the paucity of cases, enough has been shown to demonstrate the practical value of the test for blood coagulability in pulmonary tuberculosis.

SECTION V.—TUBERCULOSIS IN CHILDREN—ETIOLOGY, PREVENTION AND CURE.

Comprehensive Program for Prevention of Tuberculosis: Relative Functions of Available Agencies.

DR. LIVINGSTON FARRAND, New York: The prevention of disease is to be attained (a) by eliminating centers of infection and (b) by raising the resisting powers of individuals. Elimination of centers of infection depends on adequate facilities for early diagnosis, for treatment of curable patients, for the proper care of advanced patients, and on such restrictive sanitary regulations as may be found necessary. Increasing the resisting powers of the population depends naturally on a higher standard of living with a wider observance of a sound hygiene, which in turn can only be brought about by an extensive campaign of education. The available agencies for attaining these ends may be classified as (1) official, and (2) private. The official agencies are the fundamental ones. In the United States these are national, state and local. The possible rôle of the national government in the campaign is somewhat vague and difficult to define. The value of a national department or bureau of health in the tuberculosis field would probably be chiefly educational and coordinating. The state government is similarly of minor importance, although prominent historically. The state sanatorium is relatively unimportant, and all state foundations have certain disadvantages. The state health authorities, on the other hand, have a definite function in the educational campaign, and state legislation is required for certain purposes. Local official authority is the chief factor to be considered. Our present aim should be to arouse a sense of responsibility there. Private agencies are chiefly (a) organizations for the prevention of the disease, and (b) institutions for its treatment. Private agencies are necessary in arousing public sentiment and official responsibility. Their objects should be to carry on a campaign of popular education until public authorities assume the task, when they should turn their energies into other fields. It may be necessary to establish dispensaries, sanatoria, and hospitals under private foundations, but only as expedients and not as final means. Dispensaries and hospitals are of superior importance as contrasted with sanatoria. Hospitals for patients in advanced stages are the great present need in the United States. Educational association and effort is of prime importance at the present time.

Influence of Overwork and Nervous Strain in Tuberculosis.

DR. GEORGE DOCK, Ann Arbor, Mich., discussed the general nature of tuberculosis, its effects on the body, and the possible modifying influences of overwork and nervous strain on those processes:

To keep the tuberculous patient at the highest point of efficiency, and with the least danger to others, causing further illness and expense in an ever widening circle, he must be cared for when sick or when overwork is inevitable. This requires a great increase of hospital facilities for the tuberculous. As part of the prevention of overwork and nervous strain it is just as essential that the family of the patient is so well cared for that he will take advantage of facilities for treatment and remain under treatment until his efficiency is raised to the highest possible point. Also, when well enough to work, he must be supplied with proper facilities for the nearest approach to a living wage.

Cost of a City's Ransom.

HON. TALCOTT WILLIAMS, Philadelphia, gave an estimate of the expenditure which would be required to control tuberculosis in Philadelphia:

The ultimate extirpation and disappearance of tuberculosis exactly as leprosy has disappeared in the past, is the final goal to which this congress tends. Encouragement exists in the decrease of the relative death rate from consumption; but while, in Philadelphia, the deaths from this cause per 1,000 living have, in 20 years, fallen off relatively one-half, the absolute aggregate of those dying has remained at about 3,000 for 20 years, up to 1906. The reduction in death rate in 1907 may or may not prove permanent. Statistics of these 20 years show that while in the general community tuberculosis is on the decrease, the growth of poverty, want and wasting diseases tend to maintain the ratio of deaths from general causes. While the means of infection remain, the frequency of deaths from this disease will continue to occur, particularly among the less favored classes of society. The infection itself must be removed. A city should be held responsible as much for suppressing preventable disease as for keeping its roads in repair. Its citizens owe as great a duty to the preservation of health as of order. Philadelphia to-day has about 3,000 deaths a year from tuberculosis, although the rate was lower in 1907. In the opinion of the local bureau of health, judging from current reports of cases, of the 10,000 consumptive persons in Philadelphia, 3,000 may be expected to succumb within twelve months, and another 1,000 four months later, making at the present moment 4,000 tuberculous patients in that city alone needing expert care. The ransom of a city, therefore, calls for hospital or sanitarium provision for 4,000 in the last stages of the disease, and watchful care over 6,000 more to insure their proper nourishment and to prevent infection of others. The hospitals of Philadelphia have 1,500 bed capacity unused. Hospital provision for 2,500 more would cost in these days of concrete building materials not over $1,250,000. The maintenance of 4,000 consumptives destined to succumb within two years, and a peril to all about them, would cost at the average hospital rate of a dollar a day, $1,460,000 annually. The care, food and supervision of the remaining 6,000 not yet helpless would cost $600,000 a year. This sum would insure to them medical attendance, services of visiting nurse and proper food. Therefore, by the yearly expenditure of $2,000,000, in addition to the initial sum of $1,250,000 for hospital construction, Philadelphia could extirpate tuberculosis, and with a law imposing cumulative penalties for failures to report cases, in a period of say ten years could limit the city's death rate to that of general causes. This is a small sum to pay for the ransom of a great city—for the saving of 3,000 lives a year, and for the removal of a daily peril which menaces entire families and communities. The annual cost of maintaining the proposed undertaking would be but two-thirds that of the police, one-third that of the schools, and but double the increase made to the city's salary list in 1907.

Transmission of Tuberculosis.

DR. W. A. EVANS, Chicago: Tuberculosis is a disease of major sanitary importance. It is transmitted through air and milk—the one universally used, the other very largely used. The infected people and cows are difficult to handle, by reason of the chronicity of the disease, including its slow disabling. Air-borne tuberculosis is spread in halls, cars, working places and other assembling places as well as homes. Homes spread consumption by (a) being infected; (b) lowering vitality; (1) determining infection, and (2) determining results of infection.

Medicolegal

Railway Surgeons Who Are Not Permitted to Have Passes.

The Supreme Court of Nebraska says, in the case of State vs. Martyn, that the defendant, a physician, made a contract with a railway company to furnish all necessary surgical and medical treatment to the sick and injured employes of the railway company free of charge to said employes, and also render such services to passengers and others, for whom the company should request the same, between certain stations in Nebraska, for which he was to receive an annual pass on the Nebraska division of said railroad, together with trip passes on other divisions thereof, and $25 per month during his employment. The defendent was prosecuted for accepting a pass in violation of law, and it is held that the district court erred in directing the jury to find the defendant not guilty, and discharging him from further prosecution. The Supreme Court holds that a contract between a railway company and a physician, by the terms of which he is to receive for professional services to be rendered by him for the company, at its re-

quest, the sum of $25 per month and an annual pass over its lines of road, where the physician does not spend a major portion of his time in the employment of the company, is prohibited by the provisions of sections 10,664, 10,665, of Cobbey's Annotated Statutes of Nebraska of 1907, commonly called the anti-pass law, and the acceptance and use of such a pass by the physician renders him guilty of a violation of those sections.

Statements of Patient as to Past Pain and Evidence in Malpractice Case.

The Supreme Court of Vermont says, in the case of Wilkins vs. Brock, that where a patient makes statements of past pain and suffering when that information is necessary to a correct diagnosis, statements of it may be testified to by the physician as forming a part of the basis of his opinion. In such cases the statements of the patient have no hearsay quality, but are treated merely as observed facts, forming part of the physician's data, and bearing on the weight of his opinion, without regard to their correctness or incorrectness. But when such statements are used as direct testimonial evidence of the truth of what they assert they are carried beyond their legitimate scope, for, as to that, they are nothing but hearsay.

The court also holds that, in an action for malpractice, it is not enough to show merely that the treatment was injurious, but it is necessary to go further, and show by competent witnesses that the requisite care and skill were not exercised in giving it. Such is the doctrine of all the cases. Testimony that a patient was hurt by a treatment does not tend to show malpractice where the most that can be claimed for it is an implied admission that the practitioner hurt her by reason of overrating her strength to endure the treatment. Error of judgment is not enough, unless it is so gross as to be inconsistent with due care.

Responsibility for Death from Mistakes and Chloroform Unnecessarily Administered.

The United States Circuit Court, in New York, had, in Mella vs. Northern Steamship Co., a case where an employé sustained one of the simplest and least complicated of the various forms of shoulder dislocations, but died at the hospital from paralysis of the heart caused by the chloroform administered. But the steamship company is held not liable for the death, the jury having found that the accident and injury, dislocation, caused by the accident, had nothing whatever to do with causing or producing the death, but that the subsequent unnecessary administration of chloroform solely caused it.

The court says that it takes it that the surgeons and attendants in a hospital are not immune from the charge of being the intervening third person causing death, and not immune from the charge of causing the death of a patient therein by their own independent and wrongful acts, even if connected with a necessary operation. If they are, then they may experiment with and on every patient and unnecessarily give dangerous drugs and unnecessarily perform dangerous operations, and, if such drugs and operations so unnecessarily given or performed kill, are the sole cause of death, then the persons whose negligence caused a slight injury requiring some slight operation must answer for the consequences of such experiments and unnecessary operations and respond in damages for the death on the ground that their negligent act set the surgeon and attendants in motion, or rather gave them an opportunity to experiment and try titles with death-dealing instrumentalities.

All surgeons and physicians are liable to make mistakes and err in treatment or operations, and these errors or mistakes are the natural and probable consequences of negligence causing injury if such injury requires treatment. But the court takes it that the unnecessary giving of a poisonous drug and death therefrom are neither the natural nor the probable consequences of injury from negligence or of medical treatment made necessary thereby and which, of course, is a natural and probable consequence of injury.

In legal contemplation, negligent parties must be responsible for injury, necessary medical treatment, or surgical operations, and mere errors of the physicians and surgeons in doing necessary things, as all these are natural and probable results, happenings; but the court knows of no case holding that unnecessary treatment with dangerous drugs, which the jury found this was, is either the natural or the probable consequence of injury. It strikes the court that such treatment is both unnatural and improbable. If not, it ought to be so declared. Dangerous necessary treatment is a natural and a probable consequence of injury, and so are dangerous necessary operations; but the unnecessary giving of chloroform, dangerous to life, a drug that causes 90 per cent. of all deaths from the giving of anesthetics, as the evidence in this case showed, and consequent death from such unnecessary action, are not natural or probable results of accidents and injuries.

It is not natural for a physician or a surgeon to give chloroform unnecessarily, and it is not probable that he will. Injury and the giving of dangerous drugs unnecessarily and death caused solely by such unnecessary act are not known by common experience to be naturally and usually in sequence. Quite the contrary. So here the negligence, the dislocation of the shoulder, the going to the hospital for treatment, the unnecessary giving of chloroform and death from the chloroform so unnecessarily given, solely, "are not known by common experience to be naturally and usually in sequence," and hence the damage or death did not, according to the ordinary course of events, follow from the wrong, the negligence. The break in natural and probable sequence came at the unnatural and unnecessary giving of chloroform, an improbable act, an improbable consequence of the negligence and injury.

To have been necessary, the administering of chloroform must have been "such as would be; that can not be otherwise." Or (2) "such that it can not be disregarded or omitted; indispensable; requisite; essential; needful; required." Century Dictionary. And the court repeats and emphasizes that an unnecessary act of the character in question, not precautionary, but most hazardous, was neither natural nor reasonable nor probable.

Current Medical Literature

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

Medical Record, New York.

November 14.

1 *Observations with the Rogers-Torrey Antigonococcus Serum. G. K. Swinburne, New York.
2 Roentgen-Ray Flashes or Intermittent *x*-Rays. F. R. Cook, New York.
3 *Medical Treatment of Inflammations of the Biliary Tract. W. N. Berkeley, New York.
4 Prophylaxis vs. Treatment, or Prevention Rather Than Cure. S. W. Smith, New York.
5 *The Surgical Situation. L. Waite, Chicago.
6 *Synovitis of the Knee Joint as a Late Manifestation of Acquired Syphilis. I. Levin, New York.
7 *Action and Dosage of Phenolphthalein. W. P. Elmer, St. Louis.

1. **Antigonococcus Serum.**—Swinburne reports the results of the use of antigonococcus serum in 69 cases as follows: Chronic relapsing epididymitis, 14; acute epididymitis, early stages, 27; muscular rheumatism, without joint involvement, 14; muscular rheumatism, with one or more joints involved, 10; purely joint cases, 5; chronic gonorrhea of kidney, 2; involvement of tube and ovary, 1; persistent presence of gonococcus in urethral discharge, 2; acute prostatitis, 1; acute vesiculitis, 1; threatening epididymitis, 1; rheumatism and epididymitis, 1. Marked improvement occurred in most of the cases of epididymitis, numbering 27, the majority being relieved of pain in 48 hours and all going on to uninterrupted recovery. Other conditions that were benefited were gonorrhea, rheumatism and joint troubles.

3. **Inflammation of Biliary Tract.**—Berkeley enumerates some of the surgical difficulties encountered in operations on the bile tract: The anatomic structure makes interference one of the most difficult tasks in abdominal surgery. Old and dense adhesions often bar the way to the ducts in the very cases in which a supposed stone is most loudly calling for removal. The new thick connective tissue often simulates stone. After

removal of the stone the stitching up of the ducts is no easy undertaking. The frequent coincidence of general jaundice increases the hemorrhage, retards healing, and sometimes precipitates a fatal result. The shock of operation is often unusually profound. To the argument that biliary suppurative processes never recover without operation, he replies that there is no hard and fast line in this region between so-called catarrhal and true suppurative inflammations, and consequently palliative measures should be first tried. Finally, a permanent biliary fistula may result. He thinks, therefore, that in all but the plainest suppurative cases medical measures have probably greater relative value than is supposed. He points out, however, the uselessness of trying to dissolve the stone, and condemns massage of the liver and gall bladder as a particularly dangerous practice. He discusses medical treatment under the heads of drugs and mineral waters, diet, and exercise. The fluidity of the bile can be increased and its secretion stimulated by saline aperients, of which he prefers sodium phosphate. The glycocholate and taurocholate of sodium put an inflamed biliary mucosa into a healthy condition. All these remedies reduce intestinal putrefaction, move the bowels, and promote digestion, thus increasing the patient's resisting power. Antifermentative drugs, like salol, are often helpful. Riding in rough vehicles over stony roads, horseback riding, and tight lacing should be forbidden. Skirts are best suspended by shoulder straps. A mixed diet is most suitable and the quantity should be small at each treatment and the intervals between meals short.

5. **The Surgical Situation.**—This article is a protest against the *furor operativus*.

6. **Syphilitic Synovitis of the Knee Joint.**—Levin describes a case of synovitis of the knee joint appearing late in life, apparently as the result of syphilis innocently acquired through a wet nurse. The following points should be constantly kept in mind by the practitioner: In the first place, a patient, and particularly a woman, may carry an uncured syphilitic infection for years and show no indication of it. In the second place, a syphilitic joint disease does not show any pathognomonic clinical difference from a joint disease due to some other cause, and, unless the physician thinks of syphilis, the case may go on without the right treatment for months. Joint disease in syphilis, both acquired and congenital, is much more frequent than it is thought to be. When the joint disease is the only manifestation of syphilis, and there are no other symptoms, the nocturnal exacerbation of the pain is in itself a sufficient indication of the true etiology. The therapeutic test aids in diagnosis.

7. **Phenolphthalein.**—Elmer reports a series of animal experiments with phenolphthalein, and concludes that it probably belongs to the class of intestinal irritants, is non-toxic, at least in doses up to 25 or 30 grains, and that the average dose may be placed at from 1 to 5 grains in the powdered form, either at night, or in divided doses after meals. In hyperacidity it should be combined with an antacid.

New York Medical Journal.

November 14.

8 *Relations of the Priest and the Physician. A. B. Conger, Rosemont, Pa.
9 Iron. J. Knott, Dublin, Ireland.
10 Sixteen Cases of Achylia Gastrica. A. R. Woehnert, Buffalo.
11 *Adiposis Dolorosa. T. Klingmann, Ann Arbor.
12 Proceedings of the Third International Sanitary Convention. R. H. von Ezdorf, Quarantine, La.
13 The Resistant Breathing Tract. W. H. FitzGerald, Hartford, Conn.
14 Generalized Xanthoma Planum in a Child. R. Abrahams, New York.

8. **Priest and Physician.**—The Rev. Mr. Conger, referring to the relations of the priest with the patient in the matter of spiritual confidence, and the duty of the physician not to throw obstacles in the way thereof, says: "Suppose some one says 'I do not believe in this.' I answer that so far as the psychotherapeutic value of the sacrament is concerned that makes no difference, if the patient does. His restoration to health is what you aim to achieve. And the relief to his nervous tension is accomplished by his belief, not yours. And so on every ground it seems to be the wisdom of the physician to send such patients to the priest or the priest to the patient."

11. **Adiposis Dolorsa.**—Klingmann reports an interesting case and summarizes the results of the cases on record, numbering about 45, two-thirds of the patients being in an advanced stage and showing extreme debility, mental and physical, of long standing, sometimes one and sometimes the other predominating. Early in life, in the author's case, there was evidence of marked instability of the nervous system. The complete paralysis following a seizure, in which opisthotonus with unconsciousness was present, can not be associated directly with adiposis dolorosa, but must be regarded as an expression of a neurotic temperament. The most constant organic lesion is a change in the thyroid gland. Klingmann concludes that adiposis dolorosa is a neuropathic condition of unknown cause, occurring in women with neuropathic heredity and characterized by painful fatty swellings. Other symptoms are present to indicate an inherited unstable nervous system. No remedy has given uniform results. In the author's case surgical measures for the removal of the fatty accumulations gave relief, for a time, at least. There was improvement in the general health and freedom from pain after each operation for a considerable period.

Boston Medical and Surgical Journal.

November 14.

15 *Cancer of the Stomach. C. Graham, Rochester, Minn.
16 *Experimental Study of the Conjunctival Tuberculin Test in Guinea-pigs, Infected with Human, Bovine, or Avian Tubercle Bacilli. Specificity. Reaction Unity for the Group. Lack of Sensitization. F. T. Lord, Boston.
17 *Bursitis Subacromialis or Periarthritis of the Shoulder Joint. (Subdeltoid Bursitis.) (Continued.) E. A. Codman, New York.

15. **Cancer of the Stomach.**—Graham discusses the symptomatology and differential diagnosis, and says that the present problem is to evolve a method of early diagnosis in cancer of the stomach, so that the sufferer may be offered a chance of cure. The horizon is gradually widening. When a definite diagnosis or a strong suspicion of cancer exists, surgery alone at the present time offers hope either of amelioration or of cure.

16. **The Ocular Tuberculin Test.**—Lord's experimental studies of this test in guinea-pigs are detailed, and lead him to the conclusion that the absence of reaction in non-tuberculous guinea-pigs and the positive response in tuberculous animals are confirmatory of the specificity for tuberculosis of reactions in man.

17. **Bursitis Subacromialis.**—Codman continues the consideration of treatment of his second type of this condition, and reports cases.

Lancet-Clinic, Cincinnati.

November 7.

18 *Roentgen Examination of the Esophagus. S. Lange, Cincinnati.
19 Cause of Failure in the Treatment of Tuberculosis. F. M. Pottenger, Monrovia, Cal.

November 14.

20 Surgical Outrages. J. L. Wiggins, East St. Louis.
21 *The Human Element in Medicine. P. Zenner, Cincinnati.
22 Dysmenorrhea. H. M. Moore, Oxford, Ohio.

18 and 21. Abstracted in THE JOURNAL, Nov. 21, 1908, pp. 1806, 1807.

Medical Fortnightly, St. Louis.

November 10.

23 *Tuberculosis of the Bladder. W. Karo, Berlin, Germany.
24 Detrusor-Paresis. W. Waugh, Chicago.

23. Published in the *Virginia Medical Semi-Monthly*, Oct. 9, 1908, and the *Old Dominion Journal of Medicine and Surgery*, October, 1908.

Virginia Medical Semi-Monthly, Richmond.

November 13.

25 Physiologic Action of Anesthetics. A. B. Greiner, Rural Retreat, Va.
26 Administration of Anesthetics in Medicine and Obstetrics. H. S. Belt, South Boston, Va.
27 Administration of Anesthetics in Surgery. R. White, Lexington, Va.
28 Indications for and Selection of Local Anesthetics. L. Gwathmey, Norfolk, Va.
29 Perforating Wounds of the Uterus, Inflicted During Intrauterine Instrumentation. A. P. Heineck, Chicago.

American Journal of Medical Sciences, Philadelphia.

October.

30 *Clinical Study of Some Arrhythmias of the Heart. W. B. James, New York.
31 *Subtemporal Decompression in a Case of Chronic Nephritis with Uremia, with Especial Consideration of the Neuroretinal Lesion. H. Cushing and J. Bordley, Baltimore.
32 *Physical Therapeutics. K. T. MacKenzie, Philadelphia.
33 *Present Status of Serum and Vaccine Therapy. M. W. Richardson, Boston.
34 *Paravertebral Triangle of Dulness (Grocco's Sign) in Pregnancy. F. Smithies, Ann Arbor, Mich.
35 *Effect of Overcivilization on Maternity. F. S. Newell, Boston.
36 Relative Severity of the Different Forms of the Toxemia of Pregnancy and Its Bearing on the Treatment. C. Foulkrod, Philadelphia.
37 *Occurrence and Significance of Negative Results in Blood-Culture Studies. E. Libman, New York.
38 *Suggestions of the Pupil in General Disease. E. Jackson, Denver.
39 *Raynaud's Disease, Erythromelalgia and the Allied Conditions in Their Relation to Vascular Disease of the Extremities. B. Sachs, New York.
40 *Thrombo-Angitis Obliterans: A Study of the Vascular Lesions Leading to Presenile Spontaneous Gangrene. L. Puerger, New York.
41 Prolonged Use and Toxic Action of Sulphonal. J. E. Talley, Philadelphia.

30. **Arrhythmias of the Heart.**—James reports cases which show: 1, That complete heart block going on to a fatal termination is possible without the Stokes-Adams syndrome being present at any time; 2, that complete Stokes-Adams syndrome may exist in the presence of perfect atrioventricular conduction, an example of which condition has also been mentioned by Lépine; and 3, that there is another and closely allied syndrome, consisting of tachycardia in the presence of mitral and tricuspid regurgitation, associated with syncopal and epileptiform seizures. The physiologic end-result of these conditions is the same as in the Stokes-Adams syndrome, in that many systoles are lost through their being unable to open the aortic valves, while the physiologic origin is entirely different, being in the one case hyperrhythmicity of the atrioventricular bundle, and in the other a blocking of this structure.

31. **Subtemporal Decompression in Chronic Nephritis with Uremia.**—Cushing and Bordley report a case in regard to which they draw the following conclusions: In view of the marked improvement after cerebrospinal decompression, this case supports Traube's hypothesis that the cerebral symptoms present in the so-called state of uremia are largely due to pressure from edema of the cerebral tissue. It goes to show, furthermore, that the condition of so-called albuminuric neuroretinitis is, in large part at least, a local edema of mechanical origin. The case suggests the propriety of permanent decompression in selected instances of renal disease, when medical measures or lumbar puncture have failed to relieve existing cerebral (uremic) symptoms, or when blindness is threatened, owing to rapidly advancing degenerative changes of the nueroretinal tissues.

32. Abstracted in The Journal, June 6, 1908, p. 1929.

33. Abstracted in The Journal, June 13, 1908, p. 2019.

34. **Grocco's Sign in Pregnancy.**—Smithies points out that various observers have succeeded in obtaining a paravertebral dulness in extrathoracic affections—e. g., ascites, subphrenic abscess and multilocular cystadenoma in the abdominal cavity. From the last case Smithies was led to investigate whether similar areas of dulness might not be obtainable in cases in which the abdominal tumor was not pathologic, as in pregnancy. He reports seven cases. The patients were all primiparæ, with ages ranging from 16 to 22 years. Five were pregnant between the eighth and tenth month, one was about fifteen days overdue, and one was pregnant in the sixth month. In only two of the cases did percussion fail to demonstrate a well-marked area of dulness along the spine. The dull areas were roughly triangular, with more or less convex hypotenuses; and they were all to the left of the midvertebral line. In all cases, examination of the thorax was negative. The paravertebral areas of dulness were not so distinctly triangular in outline as those that are percussed in cases of simple effusion into the pleural sacs. The hypotenuses appeared to be more markedly convex than in cases of effusion, and there was a tendency for the paravertebral dulness to be flat-topped. In two cases the hypotenuses were at a rather higher level than the point at which the line met the spine. Moderately strong percussion strokes were used to delimit the dull areas. The triangles were generally larger when the patients lay or leaned to the left, and rather smaller, although sometimes higher, when the patients leaned to the right. There were no definite auscultatory signs over the areas or over the lung adjacent thereto. There were two cases in which the paravertebral dulness could not be percussed on either side of the spine, in whatever position the patient was placed. The paravertebral dulness in pregnancy appears to be due primarily to the abdominal tumor.

35. **Overcivilization and Maternity.**—To Newell, the conclusion seems inevitable that a type of woman formerly very rare is now becoming relatively common. He illustrates this by three case histories. The working woman—the type usually seen in hospitals—generally goes through her pregnancy and labor as the natural process it is commonly supposed to be. With the overcivilized woman, on the other hand, either great variations from the normal are possible in individual cases, or differences in class and environment have developed new conditions which will eventually necessitate the development of a new procedure. Pregnancy entails in the latter a marked reaction in which nervous symptoms are most likely to be exaggerated. Faulty elimination and autointoxication are more common, the woman is unduly sensitive to outward influences and minor discomforts. She often comes to labor, consequently, in a condition physically unfit to withstand any serious strain. The convalescence is apt to be long and unsatisfactory and we have also to reckon with a nervous breakdown. Nursing is impossible, or if satisfactory at first, has to be given up in three months or so. The elimination of the unfit during infancy, more common in the poorer than the better classes, while doubtless a factor, can not alone explain the prevalent conditions. The city-bred girl of to-day, carefully shielded from undesirable surroundings, is brought up like a hothouse plant, lacking outdoor exercise and fresh air, is overstrained at school, and the strain continued out of school with the pursuit of accomplishments such as music practice, etc. Later, her hours are late and social engagements many, and even if athletic, the time spent on golf, tennis, etc., is taken from the rest period, during which the girl of a previous generation was recuperating from the strain of social obligations, balls, etc. It is necessary to take into consideration the need of change in methods which is entailed by this condition. If the patient is not only to be delivered alive, with a living child, but is to be brought through in such nervous and physical condition that she will be able to assume the function and duties properly belonging to her after convalescence, she must be watched through her pregnancy; and if, after due consideration, the obstetrician has decided that a certain patient will probably go through labor badly, immediate delivery must be undertaken, no matter what the stage of labor, at the first indication of unfavorable signs. When it seems absolutely certain that labor will be unsatisfactory, pregnancy should be ended at a set date by operative procedures, by the method least liable to result in injurious effects to the future health of the patient. Until recently in the absence of definite pelvic contraction or faulty relation between maternal and fetal parts, operation was limited to forceps or version. But the author says that in the case of an elderly primipara with rigid soft parts, the dangers of a pelvic delivery leaving serious after-effects are materially increased, and in these cases there is no question that abdominal delivery will probably give the best results. Cesarean section, performed before the beginning of labor under proper conditions and by a competent operator, is nowadays practically without danger to life or to health, and there can be no doubt that in many cases it offers distinctly the best chance for a proper recovery.

37, 39, 40. Abstracted in The Journal, June 13, 1908, p. 2018.

38. **The Pupil in Disease.**—Jackson says that much that has

been written about the pupil in relation to general disease, is mistaken and misleading. The pupil furnishes no pathognomonic symptoms of general disease and does not finally settle any doubtful questions of diagnosis. Nevertheless it is enormously suggestive to one who is on the lookout for clues, that may be followed up. He quotes Signorelli to the effect that inequality of the pupil usually indicates the side of the body on which the lesion is situated. He refers, as suggestive, to cases of pupillary dilatation situated on the same side as a pulmonary lesion. He considers the probable explanation to be an irritative effect of the pulmonary lesion on the sympathetic. Disease of the spleen and the arch of the aorta appear also to be connected with pupillary symptoms. It ought, he says, to be recognized that all abnormalities of the pupil not due to temporary causes, are suggestive of syphilis.

Journal of Medical Research, Boston.

October.

42 *Recurrent Liposarcoma of the Kidney. G. McConnell, St. Louis.
43 Opsonic Technic. R. E. Walker, Ann Arbor, Mich.
44 *Septicemia with Acute Fibrinopurulent Pericarditis and Hypopyon Iritis Caused by Meningococcus. C. W. Duval, Montreal.
45 *Presence of Nephrotoxic Substances in the Serum of Animals with Experimental Nephritis. R. M. Pearce and H. P. Sawyer, Albany, N. Y.
46 *Hemolytic Reactions in Cases of Human Cancer. R. Weil, New York.
47 *Etiology of an Epidemic of Influenza. Relation of the Influenza Bacillus and Other Organisms to the Recent Epidemic in Boston (1907-08). Comparison with an Interepidemic Period (1902-04). F. T. Lord, Boston.
48 Microscopic Anatomy of *Trichinella spiralis*. C. Frothingham, Boston.
49 Proteolytic Enzyme of Human Milk. A. E. Austin, Boston.

42. **Recurrent Lymphosarcoma of Kidney.**—McConnell seems to think that the tumor described was in reality a hypernephroma that had taken on a fatty change accompanied by a limited malignant tendency.

44. **Meningococcus Septicemia.**—Duval reviews the literature and finds that the meningococcus has been isolated from the blood during life in a comparatively small number of cases, almost in every instance fatal, the body then showing some form of extrameningeal lesion invariably occurring in endothelial-lined cavities. General infection is probably always secondary to the diseases of the meninges.

45. **Nephrotoxins.**—Pearce and Sawyer confirm observations of Lindemann and others, that the serum of dogs with various types of nephritis has a toxic action on the kidney, but they have not been able to demonstrate any nephrotoxic power for the serum of rabbits with experimental nephritis. Consequently, the phenomenon should be used with caution in theoretical discussion of the nature of chronic nephritis.

46. **Hemolysis in Cancer.**—Weil's observations on the isohemolytic power of the serum in human cancer do not support the generalization made by Crile (THE JOURNAL, June 6, page 1883, and July 11, page 158), who regards the reaction as characteristic of cancer. According to Weil, the method yields results of such a character that great caution and reserve must be exercised in their application to human diagnosis.

47. **Epidemic Influenza.**—Lord found the influenza bacillus present in overwhelming numbers in 25 per cent. of unselected cases of cough and expectoration during the interval between epidemics of typical influenza; but the bacillus was present in only 15 per cent. of the cases with clinical features of influenza during an epidemic. Hence the influenza bacillus, as pointed out also by other investigators, can not be regarded as the principal cause of influenza, but seems to bear the same relation to it as do the pneumococcus, pyogenic cocci, and *Micrococcus catarrhalis* to both epidemic and interepidemic cases.

University of Pennsylvania Medical Bulletin, Philadelphia.

October.

50 The Postgraduate Student. W. G. Spiller, Philadelphia.
51 University Influences. J. G. Clarke, Philadelphia.
52 Actinomycosis of the Vertebræ. J. K. Young, Philadelphia.
53 *Cause of Sudden Death Following Intravenous Injection of the Blood Corpuscles of Foreign Species. A. F. Coca, Philadelphia.
54 The Medical Expert in Court. C. R. Parke, Louisville, Ky.
55 Medical Work in the Philippines. H. J. Nichols, U. S. Army.

53. **Sudden Death Following Injection of Foreign Blood Corpuscles.**—Coca summarizes his study from the Cancer Institute in Heidelberg as follows:

1. The cause of sudden death occurring within five minutes after the injection of relatively small amounts of the washed blood corpuscles of a foreign species, is a mechanical obstruction of the lesser circulation, produced by the lodgement of the injected cells in the pulmonary capillaries and arterioles.

2. The lodgement of the foreign corpuscles in the pulmonary vessels is probably due to an agglutination process.

3. The presence of specific agglutinins in the blood is not sufficient in itself to produce pulmonary obstruction on injection of the "toxic" corpuscles; an essential adjuvant factor must be assumed to exist in the blood-vessel walls.

4. Toxic substances have not been demonstrated with certainty as existing in active form in the fresh corpuscles.

5. The absorption of the specific agglutinins by the corresponding blood corpuscles takes place practically instantaneously.

New York State Journal of Medicine.

October.

56 *Significance of Uterine Bleeding. J. A. Sampson, Albany.
57 *Prostitution. H. P. de Forest, New York.
58 Hypodermic Treatment of Syphilis. A. J. Gilmour, New York.
59 Syphilis of the Gall Bladder and Bile Ducts. R. S. Fowler, Brooklyn.
60 Original Prescriptions vs. "Original Bottles." W. Brady, Elmira, N. Y.
61 Hypodermic Use of Strychnin in Paralyzed Limbs. W. D. Steele, Mongaup Valley, N. Y.
62 Lives of Officers of the Medical Society of the State of New York. (Continued.) J. J. Walsh, New York.

56. Abstracted in THE JOURNAL, Feb. 29, 1908, p. 721.

57. **Prostitution.**—DeForrest details his personal observation of police methods of dealing with prostitution in Germany. He quotes examples of the various notices and warnings, the police regulations, etc., in Berlin, and details the method of examination and the service regulations controlling physicians in Dresden. He discusses the controversy between the abolitionists and the regulators, and reproduces Vorberg's statement of the claims of the two parties. He next discusses the report of the Committee of Seven in New York. He eliminates from the discussion the abstractions of the philosopher and the conclusions of the humanitarian, which are often impractical, and adopts the view of the physician. The following fundamental rules are essential:

1. The destruction of the source of the disease, so far as this is possible; and 2, the isolation of all persons affected with the disease from those of the community who are in good health. He refers to the movement recently originated in Iowa for placing venereal diseases on the same footing with other contagious diseases. It is impossible to frame laws that shall eradicate, or even control, sexual desire. Consequently, prostitutes will always ply their trade everywhere. It is probable, however, that even with the present laws on the subject, segregation of prostitutes could be enforced, and they could be driven out from the greater portion of the city to ply their trade only in restricted areas and under such conditions that all outward signs of immorality could be suppressed. The actual medical examination of such women would markedly diminish the cases of veneral diseases, but to make it effectual the men who consort with them should also be examined. The question is necessarily at present academic, wherefore DeForest urges education in sexual matters, both of elders and children.

Interstate Medical Journal, St. Louis.

October.

63 *Development of the External Genital Organs of the Female with Especial Reference to the Hymen. F. J. Taussig, St. Louis.
64 *The Roentgen Ray as an Aid to the Diagnosis of Tuberculosis of the Lungs, with Demonstration of Skiagrams and New Orthodiascope. W. Engelbach and R. D. Carman, St. Louis.
65 Report of a Case of Abdominal Pregnancy. C. M. Nicholson, St. Louis.
66 Instrumental Uterine Perforation. A. G. Schlosstein, St. Louis.

63. **Development of External Genitals.**—Taussig enumerates and discusses the four main theories as to the development of the hymen: 1, The avulvar theory, according to which the hymen is a fold originating from the vulva or sinus urogenitalis; 2, the bilamellate, vulvovaginal theory, that one fold of the vulva and one of the vagina coalesce to form the hymen; 3, the unilamellate vulvovaginal theory, that one side of the hymen is composed of vaginal, the other of vulvar tissue, the hymen developing from the membrane left at the point where the Muellerian ducts enter the urogenital sinus. This is the one at present accepted by most anatomists; 4, von Dohrn's vaginal theory, that the hymen is formed after the breaking through of the coalesced Muellerian ducts into the urogenital sinus, and at a point further up in the coalesced ducts. Taussig has made serial sections, including the en-

fire pelvic organs (illustrations of which are given in six cases), and finds that his investigations support von Dorhn's theory, but they involve the interpretation of certain structures that were not recognized by him and to a great extent they explain the divergence of opinion. He found that in embryos of 16 to 18 cms. length, at the point where the Muellerian ducts break into the urogenital sinus, there is at times a well-defined fold, such as is described by Nabel as the hymen. At this time there is no decided connective tissue proliferation. Immediately following this stage, in embryos of 20 to 22 cms. length, such proliferation takes place. One long fold of vaginal tissue projects just internally to the fold at the entrance, until the vaginal lumen is almost wholly closed at this time. This is not merely a fold, such as the one in the 16 cm. embryo was, but is a thick well-defined membrane. In later stages, 28 to 30 cms. embryos, the original fold can still be distinguished extending from the dorsal side of the vulvovaginal opening, but it is not proportionately very much smaller, so that it might readily be overlooked beside the fleshy membrane of vaginal origin lying further inward, the true hymen. There are at this time no secondary papillæ or folds, such as are to be found in the vagina of the full-term fetus, so that it could not be said that this structure which Taussig takes to be the hymen is merely such a secondary fold or papilla. It is a thick fleshy occluding membrane, the only membrane found. A further proof that it is purely vaginal in origin is the fact that even at birth it is lined on both sides by the same vaginal epithelium. The difference in the character of vaginal and vulvar epithelium is evident from the illustrations appended. The connective tissue fibers which go to make up the hymen are directly continuous with the vaginal connective tissue fibers, and are in no wise associated with the vulvar connective tissue. Finally, the hymen has papillæ on both sides, and the edges of its orifice or orifices are often irregular, as one would expect in a membrane resulting from a proliferative process, but such as one would not expect in a membrane resulting from a ring-like dilatation.

64. See abstract No. 82.

Monthly Cyclopedia and Medical Bulletin, Philadelphia.

October.

67 *The Sick Child. T. M. Rotch, Boston.
68 Graduated Labor in Pulmonary Tuberculosis. J. Walsh, Philadelphia.
69 Laryngeal Complications of Typhoid. J. S. Gibb, Philadelphia.
70 Case of Intestinal Obstruction. L. Stewart Cegill.
71 Are Medical Books Ten Years Old Valueless? E. Cutter, Boston.

67. **The Sick Child.**—Rotch urges the importance of understanding that the infant and child are neither mentally nor physically the same as the fully developed adult. All the tissues, all the mental and physical conditions, differ widely between the first year and the second. The infant at birth is a mere automaton. Rotch describes the progress of development through the first, second and third years. With regard to children, he points out that the chronologic age is not necessarily the true age. It is the anatomic age which practically determines what the child can and should do mentally and physically without harm. Rotch urges the importance of a clear conception of the normal in the healthy infant and child. When one knows how the healthy infant or child ought to look and to behave, it will be easier to recognize how such individuals look and behave when ill. Illness is often overlooked on the ground that a child is spoiled; it is difficult to spoil a healthy child. The buoyancy, cheerfulness and good nature of young children come from a feeling of comfort and general vigor produced by healthy tissues and normal functions. The healthy child rebounds quickly from a cross word, while a sick child resents it and dwells on it. It is difficult to locate the source of pain in very young children and babies. The stomach is often blamed for reflex localized pains. Different children have different temperaments. Some have easily excited nerves, others quiescent nerves. Rotch discusses the confounding of dulness, stupidity, laziness, and other supposed mental conditions, with physical disease.

Journal of the Michigan State Medical Society, Detroit.

October.

72 Surgical Treatment of Acute Otitis Media. V. A. Chapman, Muskegon.
73 *Treatment of Exophthalmic Goiter. J. C. Solis, Ann Arbor.
74 Metastatic Sarcoma with Special Involvement of the Osseous System. R. E. Wells, Traverse City.
75 What the Manufacturing Druggist Does for the Doctor. M. P. Kemp, Detroit.
76 Differential Leucocytic Estimation in Diagnosis of Abdominal Neoplasms. W. A. Repp, Detroit.
77 Asepsis in Obstetrics. E. T. Abrams, Dollar Bay.
78 Diagnosis and Treatment of Some Cardiac Arrhythmias. H. A. Freund, Detroit.

73. Abstracted in THE JOURNAL, Aug. 22, 1908, p. 699.

Journal Missouri State Medical Association, St. Louis.

October.

79 *Postoperative Gas Distention of the Abdomen, with Suggestion for Prevention. F. J. Moennighoff, Kansas City.
80 Infections of the Knee Joint and Their Treatment. W. C. Kirchner, St. Louis.
81 Prophylaxis of Fatty Degeneration of the Heart Muscles. B. H. Zwart, Kansas City.
82 *The Roentgen Ray as an Aid to the Diagnosis of Tuberculosis of the Lungs, with Demonstration of Skiagrams and New Orthodiascope. W. Engelbach and R. D. Carman, St. Louis.
83 The Passing of an Old Therapy. O. L. Peak, Springfield.
84 Traumatic Neurosis, or Railway Spine. C. R. Dudley, Hannibal.
85 Hip-Joint Disease. G. B. Schulz, Cape Girardeau.
86 Removal of the Lachrymal Sac. J. H. Thompson, Kansas City.
87 The State's Duty to Its Citizens from a Medical Standpoint. J. A. McComb, Lebanon.

November.

88 Ocular Tuberculin Reaction. Observations of One Hundred Cases, with a Summary of the Observations of Others. A. W. McAlester, Kansas City.
89 Early Positive Diagnosis of Tuberculosis and Use of Tuberculin in Diagnosis and Treatment. E. H. Shorer, Columbia.
90 The Care of the Consumptive. E. W. Schauffler, Kansas City.
91 Public Education Against Tuberculosis Infection. T. F. Lockwood, Butler.
92 Universities and Colleges as Factors in the Antituberculosis Educational Campaign. W. McN. Miller, Columbia.
93 Case of Peritoneal Pseudomyxoma. O. B. Campbell, St. Joseph.
94 The County Medical Society. W. F. Mitchell, Lancaster, Mo.

79. **Postoperative Gas Distention of Abdomen.**—Moennighoff speaks well of the use of eserin salicylate hypodermatically in laparotomy as a prophylactic against distention. He gives 1/40 grain, immediately after the patient has returned to bed. Subsequent doses may be given but are rarely required. He has never seen any bad after-effects. He also has seen good results at the hands of Dr. H. E. Pearce from the application of a 500 candle-power leucodescent light, and considers Gelinsky's method of superheated air worthy of trial.

82. **The Roentgen Ray and Tuberculosis.**—Engelbach and Carman conclude that the *x*-ray examination is a valuable adjunct to the diagnosis of pulmonary tuberculosis for the following reasons:

1. Many of the indefinite anatomic conditions of the pleura are easily demonstrated positively.
2. The lesions of the third stage of tuberculosis (infiltrations and cavities) can be diagnosticated positively as to size, number and location.
3. The extent of known tuberculous lesions of the second stage (infiltrations and beginning lesions) are demonstrated more accurately than by physical findings alone.
4. Combined with the clinical and physical findings it affords valuable evidence in the diagnosis of a majority of the cases of incipient tuberculosis.

Texas State Journal of Medicine, Forth Worth.

October.

95 Case of Popliteal Aneurism. S. C. Red, Houston.
96 Case of Carcinoma of the Stomach Grafted on a Chronic Ulcer—Discussion of Its Frequency. J. T. Moore, Galveston.
97 *Relationship Between Pelvic Diseases and Diseases of the Mind and Nervous System. G. H. Moody, San Antonio.
98 Conservative Treatment of Mutilated Extremities. R. L. Ramey, El Paso.
99 Operation for Nasal Pressure and Reflex Pain. J. Mullen, Houston.
100 The Gonococcus: Its Relation to the Practice of Obstetrics and Gynecology. W. F. Thompson, Beaumont.
101 Hemorrhage and Shock as Postoperative Complications. W. W. Lynch, Midland.
102 Postpartum Hemorrhage—Causes and Treatment. J. E. Dildy, Lampasas.
103 Trachoma with Report of Cases. D. T. Atkinson, Dallas.
104 Postclimacteric Hemorrhage. R. R. White, Temple.
105 Therapeutic Pessimism. J. N. Mendenhall, Plano.

97. **Pelvic Diseases and Mental Disorders.**—Moody says that in considering pelvic diseases as causative factors in diseases

of the mind and nervous system, we must not forget to eliminate all such psychoses as the puerperal and lactational insanities, etc. These come under the head of infection or exhaustion or toxic psychoses, and occur frequently when no pelvic disease exists, in some women of a more or less profound neuropathic constitution, in others when menstruation is temporarily suspended for any trivial cause, and in yet others during the entire course of pregnancy at intervals corresponding to the menstrual periods. The cause of the nervous derangement in these cases can not be assigned to disease of a pelvic organ. It is merely due to the inability of the nervous system to withstand stimuli which, in a healthy individual, would result in normal physiologic changes. The psychoses and neuroses of the menopause are also to be eliminated. The menopause is not a disease condition, but a normal physiologic epoch, as is also pubescence. Each marks a physiologic transition which, in neurotic individuals, may create considerable shock to the nervous system. Many serious neuroses and insanities are precipitated at these periods of life, and those of puberty as frequently in males as in females. Masturbation in the female is no more due to a pelvic disease than it is in the male. Where there are preputial adhesions, or malpositions or adhesions of the clitoris or of other external genitals, their correction is of the greatest importance. Outside of these few instances of physical displacements and defects, masturbation in both sexes is a manifestation of a neuropathic condition, and its existence can no more be assigned to diseased ovary in the female than to a diseased testicle in the male. The radical treatment by ovariotomy is justifiable in the same degree as is asexualization in the male. Reference should be made to the possible effects of mental and nervous diseases on the female organs. Just as a lack of sufficient muscular tonicity in the intestines may cause constipation, and as a lack of general muscular tonicity due to nervous exhaustion may cause gastroptosis, gastric dilatation, strabismus, splenic displacement, etc., so will it cause uterine and ovarian displacement, endometritis, etc. Local treatment of any of these conditions will not cure the patients. In all these conditions the treatment of the local disease is secondary in importance to those measures which restore the nervous exhaustion, conserve nervous force and re-establish normal nutrition.

St. Paul Medical Journal.

October.

106 *Diagnosis and Treatment of Kidney Stones. A. D. Bevan, Chicago.
107 Syphilis of the Liver, with Special Reference to Diagnosis. M. M. Ghent, St. Paul.
108 Tests of Renal Function. W. A. Dennis, St. Paul.
109 *Plea for a More Painstaking Supervision of the Pregnant Woman. F. Leavitt, St. Paul.
110 *Shock and Its Treatment. C. S. Bigelow, Dodge Center, Minn.

106. **Kidney Stones.**—This article is practically identical with that by Bevan, abstracted in THE JOURNAL, May 30, 1908, p. 1825, and that by Bevan and Smith, published in *Surgery, Gynecology and Obstetrics*, June, 1908.

109. **The Pregnant Woman.**—Leavitt urges more attention to the period of pregnancy and the watching and studying of the forces engaged, mental as well as physical, so that we may be prepared to lend a hand when the critical moment comes.

110. Published in the *Northwestern Lancet*, Sept. 15, 1908.

Annals of Ophthalmology, St. Louis.

October.

111 *Mixed Streptococcus and Pneumococcus Infection of the Orbit and Adjacent Sinuses. C. S. Bull, New York.
112 Ocular Infection Associated with Disease of the Sinuses Contiguous to the Orbit. S. D. Risley, Philadelphia.
113 *Diffuse Interstitial Keratitis in Acquired Syphilis. J. T. Carpenter, Philadelphia.
114 Teleology and Interpretation of Nystagmus. P. Fridenburg, New York.
115 *Two Cases of Sympathetic Ophthalmia. E. S. Thomson, New York.
116 Angioma of the Chorioid. A. Quackenboss, Boston.
117 Angioma of the Orbit, with Invasion of the Globe Along the Ciliary Nerves. A. Quackenboss, Boston.
118 Recurrent Traumatic Erosion of the Cornea Due to Lachrymal Stricture. R. J. Curdy, Kansas City, Mo.

111. **Infections of the Orbit.**—Bull studies mixed pneumococcus and streptococcus infection of orbit and adjacent sinuses in a series of cases and emphasizes the following points:

The marked insidiousness of the attack, and the varying duration of the period of incubation.

The extreme violence of the symptoms in the sudden onset of the attack.

The very rapid rise of temperature and the equally sudden fall after operative interference has opened the purulent deposit.

The rapid development and violence of the symptoms point apparently to an unfavorable prognosis. Immediate and active interference, with free incisions, thorough curetting and irrigation, and prolonged and careful hunting for the purulent foci, soon bring about a more favorable condition.

The necessity for great vigilance in watching the cases and searching for new foci on any sudden and rapid rise in temperature.

The patients were all young, the oldest being 21 and the youngest 9 months old.

In only one case was the eye lost from suppuration.

113. **Interstitial Keratitis in Acquired Syphilis.**—Carpenter holds that the rarity of diffuse interstitial keratitis due to syphilitic infection is more apparent than real, because we are apt to overlook the possibility of acquired syphilis in young patients. He discusses the symptomatology, and points out that, contrary to the rule in the inherited form, the interstitial keratitis in acquired syphilis almost invariably attacks only one eye. The period of onset varies within wide limits, from three weeks to twenty-three years. Iritis and vitreous opacities, etc., well forward in the chorioid, though not unusual, are far less frequent than in the inherited type. He discusses the pathology, which is naturally somewhat indefinite, since opportunities of microscopic examination in keratitis of acquired syphilis are rare. This condition is a disease of adult life, occurring usually between the ages of 20 and 50, though it has been found in childhood and infancy. Next in etiologic importance to syphilis as a cause of interstitial keratitis is tuberculosis. Pflüger has reported thirty-six cases due to influenza. Interstitial keratitis due to acquired syphilis responds with remarkable promptitude to antisyphilitic remedies. The local treatment does not differ from that of ordinary interstitial keratitis—atropin, dionin, and rest of the inflamed organ, followed by massage with the ointment of the yellow oxid of mercury.

115. **Sympathetic Ophthalmia.**—Thomson reports two cases which terminated favorably and discusses the condition. He concludes as follows: For general administration, the drugs which resist plastic formation—the salicylates, mercury, potassium iodid and quinin—have been long advocated and continue to be our only hopeful line of treatment. The chief value of mercury is probably in cases with latent specific tendency, and, on account of the difficulty of excluding this, it is almost always wise to begin treatment by a vigorous exhibition of mercury by inunctions. The tonic value of quinin can not be denied, but personally Thomson has not had much success in its administration in this class of cases. It is difficult to give very large doses, the toxic effects are annoying, and he has always been in doubt as to its real value. Potassium iodid is of value principally in the later stages of the attack.

Ophthalmology, Milwaukee.

October.

119 *Artificial Illumination of School Rooms. M. Standish, Boston.
120 Treatment of Chronic Simple Glaucoma. C. A. Veasey, Philadelphia.
121 Glaucoma Following Secondary Cataract (Capsular) Operation, with Report of Three Cases. F. E. Cheney, Boston.
122 Microphthalmia. H. H. B. Cunningham, Belfast, Ireland.
123 Papilloma of the Cornea. E. Smith, Detroit.
124 Extirpation of the Lachrymal Sac, When and How? J. S. Wyler, Cincinnati.
125 Ocular Symptoms of Ethmoidal Disease. F. Krauss, Philadelphia.
126 Solution of Dr. George T. Stevens' "New Phenomenon of Color Conversion." E. E. Blaauw, Buffalo, N. Y.

119. **Schoolrooms.**—Standish gives the following as the essential factors in the proper illumination of school rooms:

1. The walls should be painted a very light color, preferably an exceedingly pale green or buff.

2. The wooden finish of the room and desks should be light in color.

3. The window shades should be able to exclude direct rays of the sun, diffuse daylight freely, and also in the evening reflect a generous proportion of the light which falls on them.

4. Direct illumination is desirable.

5. The lighting stations should be so arranged that no annoying shadows shall fall on the pupil's desk.

6. The newer forms of incandescent lamps and Zalinsky shades, when properly arranged, can give a candle foot illumination of 2.5 on each and every desk in the ordinary school room; and finally,

7. In most cities the expense of electricity, used in the manner above described, is not so much greater than the cost of gas as to be prohibitive.

Journal of the Arkansas Medical Society, Little Rock.

October.

127 *Five Cases of Intestinal Obstruction. W. A. Snodgras, Little Rock.
128 Abdominal Ectopic Pregnancy of Seventeen Months' Duration. R. C. Dorr, Batesville.
129 *Case of Abdominal Pregnancy. A. G. Dickson, Paragould.
130 Case of Hematocolpos and Hematometra. L. E. Willis, Newport.
131 *Obstipation: Is It a Symptom or a Disease? O. C. Howton, Osceola.

127, 129, 131. Abstracted in THE JOURNAL, July 18, 1908, pp. 249, 250.

Laryngoscope, St. Louis.

October.

132 Surgery of External Nasal Deformities. J. C. Beck, Chicago.
133 Correction of Nasal Deformities. J. O. Roe, Rochester, N. Y.
134 Correction of Nasal Deformities by Use of Paraffin. H. Smith, New York.
135 Repair of Harelip and Cleft Palate. J. F. Barnhill, Indianapolis.
136 Cosmetic and Plastic Surgery of the Ear. M. A. Goldstein, St. Louis.

Archives of Otology, New York.

October.

137 Points in the Surgical Anatomy of the Temporal Bone Bearing on the Spread and Cure of Suppuration. A. H. Cheatle, London, England.
138 Improvements of the Respirometer and Its Disinfection. C. A. Bucklin, New York.
139 Increase of the Specific Gravity of Pus in Otitis Media Suppurativa Acuta as an Indication for Opening the Mastoid Process, and Errors Connected with Hammerschlag's Method. P. T. Hald, Copenhagen, Denmark.

Long Island Medical Journal, Brooklyn.

October.

140 The Living Pathology of the Operating Table: Its Observation a Necessary Means to Accurate Diagnosis in Abdominal Diseases. R. W. Westbrook, Brooklyn.
141 Hebosteotomy. C. Jewett, Brooklyn.
142 Reliability of Sterilized and Pasteurized Milk as an Infant Food. L. Kerr, Brooklyn.
143 Bovine Tuberculosis and Certified Milk. H. Moak, Brooklyn.

November.

144 Present Practice in Sewage Purification. E. J. Fort, Brooklyn.
145 Significance of Pain in the Lower Left Quadrant of the Abdomen. J. T. Pilcher, Brooklyn.
146 Fevers of Intestinal Origin in Children. E. H. Bartley, Brooklyn.
147 Therapeutic Prejudices. E. E. Cornwall, Brooklyn.

Dominion Medical Monthly, Toronto.

November.

148 Hydrotherapy in Mental and Nervous Diseases. A. T. Hobbs, Guelph, Ontario.
149 Our Experience in Bronchopneumonia. C. S. McVicar, Toronto.
150 Influenza and Its Treatment. G. C. Meier, New York.
151 Three Cases of Gastric Ulcers with Perforation. W. E. Olmstead, Niagara Falls, Ont.
152 Intermittent Continuous Filtration System. T. A. Murray.

Journal of the South Carolina Medical Association, Greenville.

October.

153 New and Effective System of School Hygiene. E. A. Hines, Seneca.
154 Ultimate Results Obtained from Surgical, in Comparison with Medical Treatment, in Certain Ovarian Diseases and in All Ovarian Neuroses. J. A. Hodges, Richmond, Va.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Lancet, London.

October 31.

1 Lupus Erythematosus: Its Nature and Treatment. J. M. H. MacLeod.
2 *Endemic Cretinism in the Chitral and Gilgit Valleys. R. McCarrison.
3 *Administration of Tuberculin in Pulmonary Tuberculosis. A. Latham and A. C. Inman.
4 Some Unusual Sequelæ of Convulsive Seizures in Childhood. F. J. Poynton.

2. **Cretinism.**—McCarrison, as the result of an analysis of 203 cases, collected by house-to-house examination of almost every goitrous village in an area of 500 miles in the Himalayas, discusses the subject under the following heads:

1. The incidence of cretinism and its relationship to the incidence of goiter; 2, goiter in the individual and its relationship to cretinism; 3, goiter in the mother and its relationship to cretinism; 4, debilitating factors and their influence on the mother in producing cretinism; 5, types of the disease with associated symptoms. He draws the following conclusions:

1. The degree to which cretinism is associated with goiter is determined by the age of the endemic, and varies directly with the extent to which the latter disease prevails among the adult population.

2. Cretinism is rarely, if ever, due to the development of a goiter in the individual. The thyroid enlargement is, or may be, an effect: it is not the cause of the disease.

3. Defective thyroid function in the mother is the essential factor in the production of cretinism.

4. Cretinism is due to the action of toxic agents, notably that of endemic goiter, on the developing thyroid of the unborn child.

5. The thyroid defect is congenital, but it may remain latent pending its manifestations through the impulse of some accidental circumstance.

6. The defect in cretinism is one of the whole thyroid mechanism, of the parathyroids, as well as of the thyroid gland. The diversity of symptoms is due to the extent to which the defect bears on the whole or part of that mechanism.

3. **Tuberculin Treatment of Pulmonary Tuberculosis.**—Latham and Inman report further investigations, supplementary to their communication to the Royal Society of Medicine, April 1908, with regard to administration of tuberculin in pulmonary and other tuberculosis. They reach the following conclusions:

1. Tuberculin may be given with effect by the mouth or rectum or subcutaneously. The dosage is dissimilar, but animal experiments, opsonic curves, and temperature charts show that the effects produced are the same.

2. The administration of tuberculin meets with little, if any, success so long as successive autoinoculations spontaneously occur and can not be limited by the means at our command. Absolute rest is the most efficient means for limiting autoinoculation.

3. The administration of tuberculin may be adequately controlled in a large percentage of cases of pulmonary tuberculosis by a careful daily observation of the temperature and clinical condition of the patient on the lines indicated above.

4. In cases of difficulty valuable information may often be obtained from an examination of the opsonic index.

5. The German method of the routine administration of tuberculin by gradually increasing doses at stated intervals is not to be recommended. It is only satisfactory in a limited class of cases, and even then may not lead to the best results.

6. Tuberculin is a dangerous drug and its administration requires considerable experience. It is capable, when given improperly, of producing disastrous and even fatal results.

British Medical Journal, London.

October 31.

5 Work of the Research Defense Society. S. Paget.
6 *Limitations of a Purin-Free Diet. A. Bryce.
7 Tropical Abscess of the Liver Rapidly Cured by the Flexible Sheathed Trocar. L. Rogers.
8 Outbreak of an Acute Infectious Eruptive Disease (Rubella). M. B. Arnold.
9 *Home Treatment of Scarlet Fever. R. Milne.
10 Cerebrospinal Meningitis. W. St. C. Symmers.
11 *Serum Treatment of Cerebrospinal Meningitis. L. E. Holt.
12 Multiple Diverticula of the Sigmoid. W. H. M. Telling.
13 *Sanitation in Reference to Ankylostomiasis in the Tropics. Sir P. Manson.
14 Ankylostomiasis in British Guiana. W. F. Law.
15 Ankylostomiasis in South Africa. G. A. Turner.
16 Sleeping Sickness with Nervous and Mental Symptoms. L. Nattan-Larrier.
17 Bilharziasis Among Women and Girls in Egypt. B. S. Elgood.
18 *Diagnosis of Latent Malaria. A. Plehn.
19 Rare Nervous Symptoms Produced by Malaria. M. Watson.
20 Lymphatic Diseases in the Tropics. C. W. Daniels.
21 Palliative Treatment of Elephantiasis. A. Castellani.
22 *Causation and Treatment of Scurvy, Especially Infantile Scurvy. Sir A. Wright.

6. **Purin-Free Diet.**—Bryce says that the advantages of a purin-free diet are sometimes so notable as to arouse a tendency to uncritical enthusiasm. After a few years' experience one does not remain quite so sanguine as to its being a universal cure. He records cases of various conditions in which results have not been altogether favorable, and discusses the purin-free diet in this light with regard to periodical headaches, epilepsy, asthma, neurasthenia and various other conditions. He says that personal idiosyncrasy has much to do with the diverse results reported, and in his opinion, this is ultimately bound up with the metabolic activity of the cells, and especially the ability of the cells of the mucous membrane to withstand the onslaught of irritants, such as purin compounds. Small quantities of purin are almost invariably well borne, and only in isolated cases are larger doses not tolerated. The ability to tolerate purins is markedly influenced by disease—for example, neurasthenia, so called, and kidney ailments in which the integrity of the cells of the convoluted tubules is doubtful—yet a man in perfect health, with a so-called gouty tendency may tolerate them badly because they act as irritants to the mucous membrane of the hepatic ducts, and produce hepatic insufficiency.

9. **Home Treatment of Scarlet Fever.**—On the basis of an experience of many hundred cases of scarlet fever, Milne is satisfied that the method of anointing the patient with 10 per cent. carbolic oil or eucalyptus oil, day by day, and a plentiful supply of fresh air, prevents the disease from spreading. After a few days his patients were allowed to mingle freely with other people. He reports many instances in which this practice has been followed—notably one in which he brought such a patient as a guest into his own home, allowing him to mingle freely with his children at meals and at games—without ill results. Milne now prefers eucalyptus oil which is rubbed in over the entire body from the crown of the head to the soles of the feet, including the roots of the hair, the axillæ, and other flexures, both morning and evening for the first four days, then once daily until the tenth day. The throat is swabbed with carbolic oil, 10 per cent. every two hours for the first twenty-four hours. Milne has never known nose, ear or kidney trouble to follow, and the severity of the attack appears to be always mitigated. Cold must be avoided for three weeks and the children warmly clad. At first he allows only soda water or hot water and milk in equal quantities: in a few days, he permits light diet, and by the tenth day, ordinary meals. He has applied this method also in measles. This method, he asserts, dispenses with the need of elaborate disinfection afterward, the source of the disease being destroyed. Of course, it protects only against contact infection, and would not check an epidemic arising from a common source, such as infected milk.

11. **Cerebrospinal Meningitis.**—Holt reports 442 cases treated with the serum of Flexner and Jobling. He thinks that the evidence submitted must convince any candid mind that the course of cerebrospinal meningitis and its termination are distinctly modified by this treatment.

13. **Sanitation and Ankylostomiasis.**—Manson discusses the expulsion of the worm by thymol, beta-naphthol, eucalyptus oil, in combination with chloroform and castor oil; the prevention of contact with foul ground; and the disposal of feces, which last he considers the only practicable method of effectively dealing with the disease as an endemic. In native villages and scattered communities he suggests that the responsibility for the observance of a latrine ordinance should be fixed on some local notable or official. As subsidiary methods he suggests:

(a) Making use of the local postoffices for the sale at cost price of anthelmintics, just as has been done so successfully in India in connection with quinin. (b) The scattering broadcast of leaflets or posters explaining in simple language the symptoms, nature, treatment and prophylaxis of ankylostomiasis anemia. (c) The teaching in schools by pictures and object lessons the natural history of the parasite and its effects, and the importance of avoiding infection.

18. **Latent Malaria.**—Plehn discusses three phases in latent malaria, and calls attention to urobilinuria as a symptom easily to be observed, and indicating latent malaria after the disappearance of other signs. He uses Schlesinger's method, which is as follows: To the unfiltered urine add an equal quantity of a solution of 10 parts of zinc acetate in absolute alcohol in a test tube. Shake it well and add a few drops of Lugol's solution, stirring it again. Afterward the filtered mixture shows fluorescence more or less intensively according to its content of urobilin. Urobilinuria is not a specific sign of malaria, but a symptom of liver disturbance. But in every case a strong urobilinuria after malarial infection proves that the organs have not yet recovered. It seems to be missing in the primary stage of latent malaria.

22. **Scurvy.**—Wright says that an examination of the dietaries of travelers whose supplies have been limited to certain articles, and of those in great poverty who have tried to support life on tea and bread alone, shows that a diet of meat and cereals, or cereals alone, produces scurvy, as do those foodstuffs which on incineration show mineral acids, and especially phosphoric acid, in excess over mineral bases. Such facts, so far as they go, would seem to suggest that scorbutic foods produce scurvy by introducing into the system excessive mineral acid. In cases of infantile scurvy, examination of bone has shown that decalcification is going on, suggesting the presence of excess of acid or absorption or solution of lime salts. For the treatment of established scurvy the most direct mode is to administer the desired alkali in combination with an organic acid, e. g., sodium lactate. These substitutes are easily transformed in the blood into the corresponding carbonates. Another principle should be to replace the calcium and magnesium salts which may have been abstracted from the tissues. Reduction of the coaguability of the blood is present in this disease. This seems to contraindicate to some extent the use of lime juice and orange juice.

Medical Press and Circular, London.

October 28.

26 Clinical Investigation in Early Infancy. M. Marfan.
27 Case in which a Portion of a Lung was Excised. R. Morison.
28 X-Ray Treatment of Exophthalmic Goiter. C. T. Holland.
29 *Tropical or Amebic Abscess of the Liver as a Preventable Disease. L. Rogers.

29. **Prevention of Tropical Liver Abscess.**—Rogers urges the reinstatement of the ipecacuanha treatment, 30 grains (1.95), or in less acute cases, 20 grains (1.30), of chloral hydrate. No food or fluid should be given for three hours before or after the dose. He compares the rejection of the ipecac treatment to the substitution, early in the nineteenth century, of venesection and salivation for the empirical quinin treatment, which was not restored to use again till 1847. Amebic ulcer of the great bowel is readily curable by ipecacuanha, and on this ulcer, Rogers holds, the liver abscess depends.

Clinical Journal, London.

October 28.

30 *Transient Heart Murmurs. S. West.
31 Treatment of Gonorrheal Affections and of Some Forms of Arthritis of Uncertain Origin. J. P. Parkinson.
32 Management of Squint. A. A. Bradburne.

30. **Transient Heart Murmurs.**—West defines a murmur as "an abnormal noise heard between the heart sounds when nothing ought to be heard in health." He discusses transient aortic systolic murmurs, which are frequently due to excitement. This leads to temporary dilatation of the aorta with a consequent murmur which disappears as soon as the dilatation passes off. Hemic or venous murmurs and transient murmurs during chorea and rheumatic fever are discussed. He then raises the question of the so-called dilatation murmurs. He reviews the statement of Ludwig and Hasse, that the valves of the heart are not in health completely competent to close the orifices of the heart unless by means of the muscular contraction the orifice is first narrowed, and says that the statement rests on certain physiologic experiments of a very crude character, which, so far as he knows, have never been confirmed, and against which there is the strongest possible clinical evidence. He gives clinical reasons for the view that these murmurs are due to eddies set up within the dilated cavity itself.

Journal of Tropical Medicine and Hygiene, London.

October 15.

33 Case of Myiasis. J. H. H. Harrison.
34 Therapy in Yaws and in Tropical Ulcer. G. P. Heard.

Glasgow Medical Journal.

October.

35 An Obstetric Diary of William Hunter (continued.) J. N. Stark.
36 Multiple Telangiectases: Three Cases in One Family. A. J. Ballantyne.
37 Choice of a General Anesthetic. J. K. Patrick.
38 Surgical Treatment of Facial Paralysis. C. G. Cumston.

Annales de Gynécologie et d'Obstétrique, Paris.

October. XXVI, No. 5, pp. 577-640.

39 Research on the Human Yolk-sac. (La vésicule ombilicale de l'homme.) A. Branca.
40 Laceration of Perineum Treated by Simpson-Vicarelli Technic. (Trois cas de lacération périnéale complète traités avec le procédé Simpson-Vicarelli.) T. Soli.

Annales de Médecine et Chirurgie, Paris.

October 1, XII, No. 19, pp. 649-684.

41 *The Child After the Age of 2. (L'enfance. Ses périodes. Ses maladies.) A. B. Marfan.
42 Large Hernias in Children. (Les grosses hernies inguinales et ombilicales chez l'enfant.) E. Gaujoux.

October 15, No. 20, pp. 685-720.

43 Infantile Paralysis with Scoliosis and Muscular Atrophy. F. Carles and Desqueyroux.

41. **The Child.**—The phase of childhood between the ages of 2 and 7 is characterized by the fact that milk is no longer the most important food, and that certain parts of the nervous system are developing actively, especially those which preside over the motor functions and the intelligence. The will power does not become strong until later. This is the age for tracheobronchial glandular trouble, tuberculous meningitis, adenoid vegetations and the acute contagious diseases. After the age of 2, the immunity transmitted by heredity disappears and the child is less isolated. Children at this age are not more susceptible to contagions, but conditions favor them. The resisting powers are constantly growing stronger and the children generally recover completely from their acute infections. After the age of 7 there is a phase of slow growth until about 12, when there is a sudden and rapid growth up to puberty, but this growth is not harmonious. The trunk is relatively short and the thorax narrow, the heart small and the breathing capacity weak, in proportion to the height. In this period the natural conditions are identical with those which we regard as the "tuberculous constitution." It seems that the so-called "candidates for tuberculosis" retain into later life the corporal proportions of the antepuberty period, and do not grow into normal adult proportions. Marfan asks: Is this arrest in the development a predisposing cause for tuberculosis, or is it not rather already the effect of latent tuberculosis? The diseases most common at the age of puberty are typhoid fever and acute articular rheumatism, with heart complications, and possibly chorea. Tuberculosis at this age is remarkable for the frequency of the torpid forms and of galloping phthisis, and the localizations in the peritoneum and lower extremities. The thymus has completed its involution and the tonsils commence theirs. Marfan adds that between 6 and 12 the mortality is the lowest for children. The child has paid his tribute to the acute infections, while the growth is slow and harmonious. During the antepuberty phase the child requires special hygiene and restraint from excessive exercise and fatigue. Attention should be paid to strengthening the will power during this period, and Marfan adds that the home surroundings are generally better for this age than most boarding schools. In conclusion, he discusses the question whether pediatrics should be made a specialty, saying that a physician who practices among children must know, to start with, all that a physician has to know who practices only among adults, and besides this, he has to study the childish organism throughout, its unfinished development and energy of growth inducing special characteristic reactions.

Bulletin de l'Académie de Médecine, Paris.

October 20, LXXII, No. 33, pp. 233-264.

44 *Therapeutic Action of Adrenalin Applied to the Skin. (Action thérapeutique de l'adrénaline employée en badigeonnage cutané.) G. Sardou.

45 *Cancer of Body of Pancreas. (Cancer du corps du pancréas.) A. Chauffard.

44. **Therapeutic Application of Suprarenal Extract to the Skin.**—Sardou has found that a suprarenal extract applied locally to the skin has a remarkable effect on the tissues below, the constriction and following dilatation of the blood vessels modifying the circulation to such an extent that not only is pain relieved, but lesions are influenced and inflammation given a turn for the better. These effects are not constant, and the intensity and persistence of the action of the suprarenal preparation vary with different tissues and decline with repetition. But even with these restrictions, he has succeeded in arresting or attenuating the pain in swollen joints, in contusions, in various processes in the bones, periosteum, and epiphyses, congestive headache, neuralgia, sciatica, rheumatic pains, traumatic joint affections and fractures and inflamed varices. Even the viscera feel the soothing effect, pain in the liver, kidneys, bladder, stomach and intestines being relieved, he asserts, by painting the surface with adrenalin, and spasmodic contraction subsides. He has also found it useful in congestive suffocating spasms in an asthmatic and a nephritic, relieving the dyspnea. In a case of occlusion of the esophagus from a cancerous growth permeability was restored by the action of the extract, and in a cancer of the breast the pain and swelling were much reduced, although the growth continued to progress. The effect was permanent in a case of old rodent ulcer of the face, the modification being so pronounced that subsequent Roentgen treatment completed the cure. In another case the "gymnastics of the blood vessels" induced by the extract allowed the reduction of a strangulated hernia which otherwise would have required surgical intervention, as also in a case of rebellious paraphimosis. It hastens restitution, he states, as for instance when a finger remains swollen and stiff after the healing of some lesion, the suprarenal extract banishes the pain and by reducing the swelling allows the finger to be exercised. When there is no solution of continuity there is no danger of secondary hemorrhage, while the rushing back of the blood current has a most stimulating effect on healing processes, and also serves to ward off impending lesions.

45. **Cancer of the Pancreas.**—Chauffard calls attention to a syndrome which allows differentiation of a cancer in the body of the pancreas and possibly encourages the hope that the lesion may be diagnosed in time to permit its successful removal. Even when the cancer is far advanced, operative intervention relieves the patient of the excruciating pain which is the predominant feature of this form of malignant disease, owing to the close connection between the body of the pancreas and the solar plexus. Other features of the syndrome are the frequent desire for defecation—tenesmus of the entire colon—and rapid emaciation. It is rare for a tumor to be palpable, and the absence of jaundice, glandular involvement and of ascites is also striking in these cases. There is no glycosuria, and the stools never showed much fat in the cases known. There is little if any vomiting, and jaundice does not appear until in the final stages, but the pain is deep and agonizing, resembling the gastric crises of tabes. In the two cases described, the pain was at first on the left side; it lasted for several hours, recurring at intervals of eight or ten days. During the intervals there was no colic or diarrhea, but merely a vague sensation of abdominal tension and tenesmus. After a few weeks the focus of the pain shifts to the median line and then to the right side, and becomes more and more intense and the intervals shorter, and the patient complains of a constant sensation as if laced in a tight corset. One patient was a man of 37, previously healthy, until this sudden pain developed. An operation in the fourth month revealed the body of the pancreas studded with hard nodules, and a broken-down gland was found at the neck of the gall bladder, which was drained. The pain did not recur after the operation, but the patient succumbed in cachexia six months after the first symptoms. Another patient was a man of 40, previously robust. The patients can find no relief except by sitting bending far forward with the knees drawn up, to relax the abdomen. The resemblance to the gastric crises of tabes is so striking that in one case the cerebrospinal fluid was drawn by lumbar puncture to make certain that the patient was not a tabetic, although the constantly progressive character of the syndrome and the emaciation spoke against tabes. The initial pain on the left side is probably from radiation along the splenic nerves, but as the solar plexus becomes involved the pain assumes its typical median transverse and supraumbilical localization and its deep and excruciating character. The syndrome differs completely from that of cancer of the head of the pancreas.

Presse Médicale, Paris.

October 24, XVI, No. 86, 681-688.

46 *Acute Tuberculosis of Typhoid Type. (La typho-bacillose.) L. Landouzy.

47 *Verdict of French Surgical Congress on Treatment of Facial Neuralgia. J. A. Sicard.

46. **Tuberculosis Simulating Typhoid.**—Landouzy states that his later experience has confirmed his announcements of twenty years ago in respect to a form of tuberculosis causing a typhoid condition with continuous fever and enlargement of the spleen, but without visceral localizations. The fluctuations in the temperature are more irregular than in typhoid, the pulse is not accelerated, and there is no catarrh in throat

and bronchi as is constant in typhoid. The prognosis at the time is much more favorable than in typhoid, but it is far graver as to the future. The transition of the "typho-bacillosis" into the pulmonary form with cavities, in the course of ten months of continuous fever, is not unusual.

47. **Treatment of Facial Neuralgia.**—Sicard comments on the increasing tendency to abandon intervention on the Gasserian ganglion for surgery of the roots and, still more, for local injections of alcohol. Destruction of the root at the base of the brain seems to be the only means of preventing recurrence.

Semaine Médicale, Paris.

October, 28, XXVIII, No. 44, pp. 517-528.

48 *Astereognosis and Tactile Asymbolia. (Stéréoagnosie et asymbolie tactile.) F. Rose and M. Egger.

48. **Tactile Localization and Symbolia.**—A number of works on these subjects have appeared lately and Rose and Egger discuss them and report two cases, from Raymond's service, in which there was no sense of tactile localization, both patients having certainly some lesion in the brain. In another case a man of 33 presented typical pure tactile asymbolia. They conclude from their research that there is no case on record of pure primary tactile astereognosis except in infantile hemiplegia. The presence of astereognosis and asymbolia with slight sensory disturbances confirms the assumption of a cortical lesion.

Archiv für klinische Chirurgie, Berlin.

LXXXVII, No. 3, pp. 497-796. Last indexed, Oct. 31, p. 1556.

49 *Further Progress in Treatment of Chronic Cardiospasm. (Therapie des chronischen Cardiospasmus.) G. Gottstein.
50 Stenosis of the Bowel from Submucous Hematoma in a Hemophiliac. (Darmstenose durch submucöse Hämatome bei Hämophilie.) A. v. Khautz.
51 Dissecting Osteochondritis of the Knee. K. Ludloff.
52 *Plastic Resection to Restore Function to Old Amputation Stump. (Verwerthung eines alten Amputationsstumpfes mittelst plastischer Resection nach Vanghetti.) D. de Francesco.
53 *Operative Treatment of Unilateral Pulmonary Tuberculosis by Total Mobilization of Wall of Chest and Release of Lung. (Pleuro-Pneumolysis totalis.) P. L. Friedrich.
54 Restoration of Balance in Regard to Space in Chest After Extirpation of One Lung. (Raumausgleich in der Brusthöhle nach einseitiger Lungenamputation.) Id.
55 Study of Coxa Valga, Especially the So-called Coxa Valga Luxans. J. Kumaris.
56 *Decapsulation of Kidney in Chronic Nephritis. (Nierenentkapse lung bei chronischer Nephritis.) G. Gatti.
57 Experimental Research on Incarceration of Hernias. (Experimentelle Untersuchung über Einklemmung von Brüchen.) C. Ritter.
58 *Treatment of Hydrocephalus in Small Children. W. Kausch.

49. **Treatment of Chronic Cardiospasm.**—Dilatation of the stenosis with an elastic water bag has been improved by Gottstein by making the bag less elastic and giving it the shape of a dumb-bell with a firm silk envelop. His illustrations show how the bag fits into the stenosis and stretches it as water is pumped into the bag. The effect is entirely different from that of the usual soft elastic bag, which bulges out above and below the stenosis without exerting pressure on the latter, except as it is pulled through the constriction. He describes six cases in which this forcible permanent stretching of the cardia by way of the mouth cured the spasmodic contraction. The first patient was a young woman who had suffered for four years from cramp-like pains and regurgitation of food with retention up to 100 c.c. in the esophagus. Transient benefit was obtained by the soft elastic bags, but the trouble constantly recurred until the inelastic "dilatation sound" was used. The cardia was thus stretched to 8, then to 10 and to 11.5 cm., which cured the condition permanently with no recurrence during the two years since. The second patient was a man of 37, and the history, the Roentgen picture and esophagoscopy showed the early stage of chronic cardiospasm with residuum of 10 c.c. Two applications of the "dilatation sound," stretching the stenosis to 11 cm., restored conditions permanently to normal. In the third case the symptoms had been noted for eighteen years and the patient learned to dilate the stenosis himself. In the three other cases the cardiospasm was accompanied by great enlargement of the esophagus above. Two of these patients were entirely cured and the other was much improved. No mishaps were ever observed with the dilatation sound, and it can be used at the office. In none of the cases related it was deemed necessary to use an anesthetic, but if the stretching should prove very painful he would not hesitate to inject morphin, although the pain is a valuable means of control. The best results were obtained when the stretching was repeated several times at one sitting. He does not attempt to dilate the stenosis by pulling the bag through, but merely by increasing the distention of the strong bag.

52. **Plastic Resection of Old Stump to Restore Function.**—THE JOURNAL described, June 15, 1907, page 2079, Vanghetti's method of utilizing the stumps of the tendons and muscles for the functional use of the arm. De Francesco has been applying this technic in a case, five years after amputation, striving to make a "plastic motor" by this technic. The result confirms Vanghetti's assumptions and shows the errors to be avoided in such cases in future. The article is illustrated.

53. **Operative Treatment of Pulmonary Tuberculosis by Total Mobilization of Chest Wall.**—Friedrich thinks that comparatively little benefit results from resection of parts of the ribs. The wall of the chest must have all the bones cut away, without the least injury to the pleura, and this extensive operation he has performed in three cases with very promising results. In this "pleuro-pneumolysis" he resected nine ribs with a total of from 126 cm. to 163.5 cm. of ribs in each of the different cases. When the tuberculous process is forming cavities and is restricted mostly to one side, and the fever keeps up, the process progressing in spite of internal and climatic measures, or when a tendency to healing is evident, he recommends releasing the lung tissue to allow it to shrivel by this extensive mobilization of the chest wall above. The main factors in successful intervention of the kind are skillful anesthetization, the suitable position of the patient and rapidity of operation. The article is illustrated and various points in the technic are emphasized. The principal danger is in the behavior of the heart as it seeks to adapt itself to the new physical conditions in the chest. Friedrich has succeeded in keeping dogs alive after extirpation of one lung without inflammatory changes or development of adhesions between the pleura and pericardium. The large defect left after removal of a whole lung became compensated by displacement of the heart and mediastinum toward the defect, vicarious emphysema of the other lung, rising of the diaphragm and flattening of the ribs—all this without inflammatory cicatricial contracture. Especially remarkable in his dogs was the flattening of the ribs from the atrophy of disuse, thus making the thoracic cavity much smaller.

56. **Decapsulation of the Kidney for Chronic Nephritis.**—Gatti gives the history of this operation and reports its application in the case of a young man with Bright's disease who survived for twenty-eight months after the bilateral decapsulation. The general health showed marked improvement for twenty months so that the patient's earning capacity was restored, but then the old symptoms returned, the intervention not having permanently arrested the disease. A new capsule formed around the kidneys, but of compact fibrous tissue with few and small blood vessels.

58. **Treatment of Hydrocephalus in Small Children.**—Kausch reviews the experiences with 14 cases at Mikuliez's clinic, and discusses the various methods of operative treatment followed, comparing them with the experiences reported by others. The children were between 3 and 48 months old. The results of the surgical treatment were disappointing; transient improvement was observed but rarely, and the children usually succumbed soon after the operation. Complete success was realized only in one case. This patient was a child of 15 months with extreme hydrocephalus and spina bifida treated by a radical operation on the latter, with subcutaneous drainage of the meningeal sac. Kausch has been able to find on record 13 cases of recovery after operative intervention: in 6 cases the ventricle was punctured from one to seven times; in 4 cases lumbar puncture was repeated from three to twenty-five times; 2 of the children recovered under open drainage of the ventricle and his own patient under subcutaneous drainage of the lumbar subdural space. Antisyphilitic treatment should always be tentatively administered,

both before and after puncture, as it does no harm in any case and may benefit, even in the non-syphilitic cases. Repeated puncture promises well, and he advises alternate puncture of the ventricle and of the lumbar spinal cavity. In puncturing the ventricle he would utilize the open spaces in the skull, avoiding the median line, or would puncture through a single drill hole, drawing less than 100 c.c. at a time from the ventricle and 55 c.c. by lumbar puncture.

Archiv für Verdauungs-Krankheiten, Berlin.

October, XIV, No. 5, pp. 479-627.

59 *Influence of Hydrogen Dioxid on Stomach Secreting Functions. (Einfluss des Wasserstoffsuperoxyds auf die Sekretion des Magens.) A. Petri.
60 *Changes in Chemistry of the Stomach After Gastroenterostomy. (Veränderung des Magenchemismus nach Gastroenterostomie.) L. Schönheim.
61 Occurrence of Dissolved Substances in the Stools with Increased Peristalsis of the Intestines. (Zur Lehre von den Abführmitteln.) H. Ury.
62 *The Lactic Acid Bacillus in the Digestive Tract and its Relations with Functional Gastric Disturbances. (Vorkommen der sog. "langen Bazillen" im Verdauungstraktus und ihre Beziehung zu den Funktionsstörungen des Magens.) E. Fricker.

59. **Action of Hydrogen Dioxid on Secretion in the Stomach.**—Petri noticed that a 1 per cent. solution of hydrogen dioxid caused increased secretion of saliva when the mouth was rinsed with it, and experiments with it taken into the stomach show that it reduces the total acidity, especially the proportion of free hydrochloric acid. Its action in this respect is approximated only by that of oil, which it far surpasses. He gives the details of eleven cases in which it was tested, after establishing its absolute harmlessness on himself and others. The free hydrochloric acid can be reduced to zero, but it is a question whether this is the result of restriction of the secretion of acid or of increased production of mucus. When it is used to reduce the acidity within normal bounds, he advises giving the dioxid like a mineral water, in the morning, fasting, 1 to 3 parts in from 200 to 300 c.c. water. Or it can be used in a 0.25 or 0.5 solution for rinsing the stomach in case of hyperacidity and acid fermentations. The therapeutic use of the dioxid promises to render good service in cases of hyperacidity, hyperchlorhydria, ulcer, spasm of the pylorus, etc. It is possible that it might have a favorable influence also in hemorrhagic conditions, as it has been found useful in this line in epistaxis and uterine hemorrhage.

60. **Changes in Chemistry of the Stomach After Gastroenterostomy.**—Schönheim has examined five patients after gastroenterostomy, the findings confirming in every respect the results of Katzenstein's experimental research in this line. It is evident that the gastroenterostomy not only puts an end to the motor disturbances, but it also improves the conditions in regard to secretion and the chemistry of the stomach. His findings indicate that the operation should be considered in cases of obstinate hyperchlorhydria, even without stenosis of the pylorus and ulcer. In nearly every case after gastroenterostomy there is regurgitation of bile and pancreatic juice into the stomach. They appear even in half an hour when the food contains much fat. The alkaline intestinal juice reduces the acidity of the gastric juice by a chemical reaction, while the pepsin becomes inactive in the alkaline medium, but the trypsin remains active even in a weakly alkaline medium. It is possible to eliminate the hydrochloric acid entirely and thus to promote the healing of a gastric ulcer. This can be accomplished by frequent meals, much fat in the food, and copious ingestion of water. Although gastroenterostomy thus responds to the indications for causal therapy of gastric ulcer, yet internal treatment should be tried long and carefully, and only when the gastric ulcer shows no tendency to heal should operative treatment be advised.

62. **Lactic Acid Bacilli in Digestive Tract.**—Fricker has found lactic acid bacilli in the mouth, esophagus and intestines, as well as in the stomach. In examination of 148 patients with normal or increased acidity and normal or reduced motility, a few lactic acid bacilli were found, but the granulose reaction could only rarely be obtained, and tests for lactic acid were always negative. The findings were approximately the same in 31 cases of much-reduced acidity but normal motility. In 15 cases of carcinoma of the stomach with entire absence of free hydrochloric acid, lactic acid bacilli were found constantly, giving the granulose reaction, and lactic acid was also present in large amounts. Under normal conditions the stomach empties itself of fluid and solid content, including the saprophytic micro-organisms. Contrary to the other saprophytes, the lactic acid bacilli are unable to proliferate, even when there is stagnation of stomach content, unless there is disturbance in the production of hydrochloric acid. The discovery of large numbers of lactic acid bacilli, therefore, justifies the assumption of reduced production of hydrochloric acid and reduced motility; these conditions are encountered with cancer, but also with some other stomach disturbances, consequently these bacilli have no pathognomonic significance. It is much easier to detect these bacilli than to obtain the chemical lactic acid reaction, as the scrap of stomach content in the eye of the sound will suffice for microscopic examination. In four cases described in detail, the bacilli vanished after pylorectomy for incipient cancer, although the chemical functions remained unchanged. As there was no ulceration of the cancer, the Weber blood test and the Salomon albumin serum test gave negative findings. In another case the positive bacteriologic findings were explained by discovery of numerous lactic acid bacilli between the carious teeth. The stomach findings in this case were normal, the cancer being at the sigmoid flexure. This case shows that when lactic acid bacilli are found in the stomach content and the chemistry of the stomach is normal, the bacilli originate at some point above in the alimentary canal.

Beiträge zur Klinik der Tuberkulose, Würzburg.

X, No. 4, pp. 293-399. Last indexed, October 31, p. 1557.

63 Tuberculol and Béraneck's Tuberculin. G. Landmann. Id. H. Sahli. Id. E. Béraneck.
64 *Influence of Pleuritic Effusions on Course of Pulmonary Tuberculosis. (Einfluss pleuritischer Exsudate auf den Verlauf der Lungentuberkulose.) R. Konzelmann.

64. **Influence of Pleural Effusion on Pulmonary Tuberculosis.**—Konzelmann is able to add 8 more cases to those on record in which a tuberculous process in the lungs healed under the influence of a pleural effusion. In 26 cases a favorable influence from the effusion was marked in 16; 3 of these patients were in a group of 9 cases of advanced bilateral processes. The influence of the compression from the effusion was evident in the subsidence of fever, reduction of expectoration and improvement in the general health. In all but 2 of the 16 cases showing a favorable influence the patients' earning capacity was fully restored and has remained thus to date, in 8 cases during an interval of from one to nearly eight years. All these patients belonged to the working classes and the conditions were not hygienically favorable. One of them is a driller of holes in a locomotive factory, another is an iron cutter. The influence from the effusion is generally unmistakable, although the effusion was absorbed in two or three months at longest, with the exception of one case. Even after the disappearance of the effusion, respiration in the lung evidently proceeded less vigorously, and thus the lung was given comparative rest. The 26 cases are described in detail; the results encourage treatment of certain cases of pulmonary processes by artificially inducing a pneumothorax. The communication issues from a Zurich sanatorium, in charge of Staub.

Beiträge zur klinischen Chirurgie, Tübingen.

LIX, Supplement, pp. 1-229.

65 *Report of Heidelberg Surgical Clinic for 1907. A. Narath.

65. **Progress in Surgery.**—Narath reviews the work of the surgical clinic last year and expatiates on the progress realized by the more extensive use of local anesthesia. A 1 per cent. solution of novocain, with addition of a little suprarenal preparation, is used for the local anesthesia, and this allows a constantly increasing proportion of operations to be done without admission to the hospital. He says that any one who has had experience on his own body of the faultless action of the novocain-suprarenal anesthesia is sure to become its enthusiastic advocate and to regard it as malpractice thereafter when general or spinal anesthesia is used in cases for which local anesthesia would have sufficed. The ether-drop

method is given the preference for general anesthesia, usually preceded by small doses of morphin and scopolamin. The latter were also found useful as a preliminary to local and spinal anesthesia.

Berliner klinische Wochenschrift.

October 26, XLV, No. 43, pp. 1917-1960.

66 *Fixation of Complement in Serum Test in Inherited Syphilis, Scarlet Fever and Other Infectious Diseases. (Komplementbindung bei Syphilis hereditaria, Scharlach und anderen Infektionskrankheiten.) L. Halberstaedter, E. Müller and A. Reiche.
67 Coincidence of Congenital and Acquired Cardiac Defects. (Zusammentreffen angeborener und erworbener Herzfehler.) A. Dietrich.
68 *Blood Pressure and Its Measurement in Chronic Nephritis. (Blutdruck und Blutdruckmessung bei chronischer Nephritis). H. Engel.
69 "Insufficiency of the Spine" and Scoliosis. (Insufficientia vertebræ und Skoliose.) A. Schanz.

66. **Complement-Binding Test in Various Infectious Diseases.**—The Wassermann technic was applied in 9 cases of measles, 5 of varicella and 14 of pertussis—all in infants—with invariably negative results. In 10 cases of scarlet fever the reaction was positive in 5. The positive findings were obtained only during a certain period in the scarlet fever, and only with certain extracts which seemed to possess the power to bind the complement in the serum of scarlet-fever patients as well as syphilitic serum. In 27 cases of manifest inherited syphilis, 25 of the infants gave a positive response. The reaction was constantly negative in 10 infants free from any sign of syphilis, while it was positive in 30 out of 68 cases suspicious of syphilis, including the 25 infants with manifest syphilis. In 4 other cases the infants had previously showed signs of syphilis which had subsided under treatment. The infants examined were in an orphan asylum and thus under constant observation for a long time.

68. **Measurement of the Blood Pressure in Chronic Nephritis.**—Engel pleads for the more general use of the tonometer as sufficiently accurate for general practice, while it affords most useful information for diagnosis and prognosis, and is a guide for effectual treatment. Uremic disturbances are frequently revealed by a sudden rise in blood pressure before they become evident in any other way. In nephritis with the parenchyma mostly involved a rapidly rising blood pressure, without signs of uremia, warns that the heart is failing. As the heart action is improved, the blood pressure drops. The former assumption that chronic parenchymatous kidney lesions are accompanied by nephritic hypertension is erroneous, the result of confusing it with cardial hypertension. In case of contracted kidney, a sudden pronounced drop in the high blood pressure indicates the giving out of the heart. He thinks it probable that every interstitial nephritis is nothing more than a localized arteriosclerosis in the kidney. Arteriosclerosis in time always leads to nephritis; in distinction from this secondary arteriosclerotic nephritis, true contracted kidney can be regarded as a primary arteriosclerotic nephritis, and high systolic blood pressure is an essential symptom of contracted kidney.

Centralblatt für die Grenzgebiete der Med. und Chir., Jena.

Oct. 22, XI, No. 19, pp. 721-768. Last indexed, Sept. 12, p. 954.

70 Paget's Disease of the Bones. (Die Paget' sche Knochenerkrankung.) K. H. Schirmer. Collective review of the literature. Commenced in No. 15.

Deutsche medizinische Wochenschrift, Berlin.

October 22, XXXIV, No. 43, pp. 1833-1880.

71 *Recent Progress in Knowledge of Diabetes. (Neuere Forschungen auf dem Diabetes-Gebiete.) F. Blumenthal.
72 *Functional Diagnosis and Treatment of Heart Affections. (Herzkrankheiten.) A. Strubell. Commenced in No. 42.
73 *Indications for Chondrotomy with Apical Tuberculous Processes. (Indikationen zur Chondrotomie bei Lungenspitzentuberkulose.) P. Harrass.
74 Trypanosome Toxin and Resulting Parenchymatous Keratitis. A. Leber.
75 *Cystoscopy and Catheterization of Ureters in Children. (Cystoskopie und Ureterenkatheterismus in der Kinderpraxis.) E. Portner.
76 *Tumors in Bladder in Children. (Kindliche Blasentumoren.) Rumpel.

71. **Recent Progress in Knowledge of Etiology of Diabetes.**—Blumenthal comments on the discovery of the substances in the pancreas which activate the destruction of sugar by the ferments, and regards the lack of these substances as the primal cause of diabetes, although the final demonstration of this has not yet been given. The nervous system can also be regarded as participating in the etiology of diabetes as the central organ regulating all the metabolic processes. The muscles can also be regarded as a diabetogenetic organ, as the oxidation of sugar takes place principally in the muscles. If the functional capacity of the muscle for oxidation of sugar suffers for any reason, hyperglycemia and glycosuria are the inevitable result. Sugar is formed in the diabetic from the carbohydrates and from the albumin, and the amino acids are an important source for the production of sugar from albumin. The formation of sugar from fat has not been proved or disproved to date, but the production of acetone from albumin is now an established fact. As the albumin bodies are destroyed, carbohydrates are produced, which thus provide material that powerfully promotes the oxidation of acetone in the body.

72. **Functional Diagnosis and Treatment of Heart Affections.**—Strubell has been making a special study of the elasticity of the vessels to determine whether increased resistance offered by the peripheral vessels is of a transient, vasomotor nature or permanent from angiosclerotic changes. The warm bath is often valuable for deciding this question, as also for treatment. In case of pronounced arteriosclerosis, a warm bath of an hour's length will relieve the heart of a fifth to a third of its work during this hour, which is a great relief for the overburdened organ. The success of the warm bath in severe angiosclerosis has been actually startling in his experience, he says, adding that the physician who makes a systematic study of the blood pressure in his cases of angiosclerosis, is able to diagnose the condition from ten to twenty years earlier than physicians who neglect this important aid for early diagnosis. His arteriosclerotic patients are thus much younger than those of the older school, and he does not fear rupture of a vessel in the brain at this early stage from these warm baths, especially as he follows the warm—not hot—baths with a very hot foot bath to ensure diversion of the blood from the head. The delay and incompleteness of the drop in the blood pressure in the bath form the index for the capacity of dilatation of the blood vessels. Another important means of obtaining information in regard to the heart is afforded by determination of the ability of the heart to respond to nerve stimuli. For this purpose a weak alternating electric current is passed through the patient's body as he sits with dilated blood vessels in the warm bath, the entire surface of his body serving as the electrode. The electric current induces contraction of the vessels, and this is followed by an improvement or insufficiency in the heart action according as it is capable of normal functioning or not. With the normal heart the blood pressure rises, while the auricular pressure subsides, but with a pathologic heart the reverse is observed, the blood pressure drops while the auricular pressure rises. The test is similar to Basch's irritation of the exposed sciatic nerve in the dog, and gives important differential information, although it must be managed with great caution. The Roentgen rays show functional and anatomic changes in the heart before they are perceptible by percussion. The more we learn in regard to the heart, the more complex its functions are seen to be. We can already enumerate twenty-four kinds of influences, exclusive of the nerves. He regards as a great progress the graphic registration of the electric phenomena which accompany the contractions of the heart muscle, especially when recorded with the string galvanometer. He gives a number of tracings of these electrocardiograms, comparing the normal with various pathologic findings. They reveal at a glance the existence of neurasthenia and other characteristic abnormal findings, and allow an oversight of the heart functioning never previously attained.

73. **Chondrotomy for Apical Tuberculosis.**—Harrass warns that the severing of the ossified costal cartilage to mobilize the wall over an apical process has little prospect of successful outcome if the rigid cartilage is accompanied by a primary malformation of the first ribs showing that the trouble

is the result of defective development in the first place. If there is much scoliotic asymmetry of the opening of the thorax the chondrotomy is not of the slightest use. If done under these conditions it merely throws discredit on Freund's operation for relief of an incipient apical process. It is indicated when central or peripheral ossification of the cartilage is observed with an incipient apical tuberculous process, or when the cartilage is primarily abnormally short and systematic exercises in deep breathing fail to improve the defective function. In every case it is important to determine with the Roentgen rays the exact conditions in the opening of the thorax, and in future the published reports should be accompanied by the skiagram of the opening.

75. **Cystoscopy and Catheterization of the Ureters in Children.**—Portner advises restricting these measures to the cases in which they are really indispensable, not resorting to them when there is no pathologic sediment in the urine, no matter how pronounced the bladder or kidney disturbances, nor in cases in which hematuria is accompanied by tube casts or by hemorrhages elsewhere, showing that it is merely one manifestation of a hemorrhagic diathesis or a nephritis. They are also contraindicated in cases of pyuria in which progressive improvement is observed under treatment. If the diagnosis is still wavering after four weeks in cases of hematuria and pyuria, then it should be made certain by cystoscopy or catheterization of the ureters as needed. They are both applicable for girls after they are a year old, and cystoscopy for boys after the second year. Catheterization of the ureters is scarcely possible for boys under the age of 8. The cystoscopic examination is free from danger, but requires general anesthesia; the bladder reflex persists even longer than the corneal reflex. The catheterization of the ureters should be supplemented by the usual functional tests of the kidneys, as for adults. He describes nine cases to show the benefits of these measures in dubious cases in children. His little patients were from 2 to 13 years old. The youngest patient was a boy with a large stone in the neck of the bladder. The cystoscope was introduced readily after slitting the external orifice. On the whole, he states, children display an extraordinary tolerance on the part of the urethra and bladder to instrumental intervention. Reports from various lands emphasize the rapid and prompt recovery of children after operations for removal of stones. This tolerance is in marked contrast to the slight resistance offered by children to certain other operative measures.

76. **Tumor in Child's Bladder.**—Rumpel reports the removal of a conglomerate of myxofibromas from the bladder of a boy of 3. There is no hemorrhage with these tumors, as the mucosa is not involved. Retention of urine is the main symptom.

Jahrbuch für Kinderheilkunde, Berlin.

October, LXVIII, No. 4, pp. 391-520.

77 Bacteriologic Research on Measles. (Aetiologie und Pathogenese der Masern.) D. Pacchioni and C. Francioni.
78 *Anemia in Young Children. (Anämie im frühen Kindesalter.) H. Schelble.
79 Experiences with Intubation for Diphtheric Laryngeal Stenosis. F. Lotsch.
80 *Brain Findings in Infants with Inherited Syphilis. (Grosshirnbefunde bei hereditär-syphilitischen Säuglingen.) B. Weyl.
81 Physiology of Growth and Development of Child's Organism. (Zur Physiologie des Wachstums und der Entwicklung des kindlichen Organismus.) A. O. Karnitzky.

78. **Anemia in Young Children.**—Schelble reports a case of probable hemophilia in a child of 2. The anemia from the repeated losses of blood was combated by injection of from 10 to 18 c.c. of defibrinated blood from healthy adults. The improvement under these injections was pronounced and striking, and the restoration of normal conditions in the blood was accompanied by improvement in the general health. Five of these injections were made in the course of six weeks. It is useless to attempt this transfusion of blood, he says, when the blood-producing apparatus is irreparably injured. It should not be done as a last resort, but should be tried as early as possible when anemia in children is assuming a grave form. The injections were made under the skin of the thigh. Some substance in the serum evidently acts as a stimulus for the blood-producing organs.

80. **Brain Findings in Children with Inherited Syphilis.**—During the last two years Weyl has examined the brains of six children with inherited syphilis who lived from two weeks to five months. There were no clinical symptoms of brain trouble, except in one case, but in every one the pia was found abnormal at different points, with thickening or infiltration. In five cases large numbers of typical lymphocytes were found in the pia. In the case with the most lymphocytes there were no signs of bronchitis. In all the children the morbid changes in the pia showed numbers of large round cells; in three cases the brain below was also affected.

Medizinische Klinik, Berlin.

October 18, IV, No. 42, pp. 1595-1632.

82 *Cutaneous Tuberculin Reaction in Nurslings. (Kutane Tuberkulinreaktion bei Säuglingen.) Ellenbeck.
83 *Symposium on Pernicious Anemia.
84 *Tetany with Autopsy Findings. H. Berger.
85 Improved Credé Technic for Prevention of Ophthalmia Neonatorum. (Resultate mit meinem neuen Verfahren der Credéisierung der Neugeborenen.) H. Hellendall.
86 Negative Experimental Research on Duodenal Glycosuria. A. Visentini.

82. **Cutaneous Reaction to Tuberculin in Infants.**—Ellenbeck applied v. Pirquet's test to 232 infants and obtained a positive response in only 5, 3 of whom died later, and the presence of tuberculous lesions was confirmed by autopsy; 2 are still alive, but with unmistakable tuberculous processes. Tuberculosis was discovered also in some of the 20 infants who died after a negative reaction, but the tuberculosis in these cases was in the advanced stage in which the reaction is inevitably negative. He commends the cutaneous reaction as harmless, simple and reliable, proving sometimes the first sign of latent tuberculosis. Negative findings are conclusive only when the test has been repeated several times at two-week intervals.

83. **Pernicious Anemia.**—Continuing this symposium, von Jaksch states that the similarity of pernicious anemia to kala-azar suggests a protozoon infection. He adds that treatment by the Roentgen rays or high-frequency current may possibly yet prove effectual; drugs hitherto have had little influence. Grawitz reaffirms his idea of intestinal intoxication as the cause of pernicious anemia in the majority of cases. The prospects of a cure in this form under dietetic and medicinal measures are very good. Schultze states that Fowler's solution has given long-continued improvement in some cases in his experience. In one case an improvement bordering on a complete cure was obtained with Levico water. This patient was an elderly man.

84. **Tetany with Autopsy Findings.**—Berger's patient was a woman of 29 who had had recurring articular rheumatism before puberty at 17. At 18 a large goiter was operated on: it required operation again eleven years later, and tetany followed, constantly increasing in intensity, the attacks being accompanied by loss of consciousness. The emaciated patient succumbed in a few weeks to a mild intercurrent diphtheria. The autopsy findings showed the characteristic changes in the nervous system, degeneration of the cells of the anterior horns, etc.

Münchener medizinische Wochenschrift.

October 20, LV, No. 42, pp. 2169-2216.

87 *Tuberculin Immunity. F. Hamburger.
88 *Marmorek's Serum in Surgical Tuberculosis. M. Strauss.
89 Origin and Treatment of Enterocele. (Entstehungsgeschichte und Behandlung der Eingeweidebrüche.) W. Koch.
90 *Serum Therapy of Epidemic Cerebrospinal Meningitis. O. Orth.
91 *Giant Scalp Tumor. (Zur Kasuistik der Schädeldeckentumoren.) H. Klostermann.
92 Bacteriologic Technic. E. Schottelius.
93 Rapid Surgical Roentgen Photography. L. Gilmer.
94 *Some Unusual Cases of Syringomyelia and Dystrophy. (Klinische Kasuistik aus der Praxis.) W. Erb.

87. **Immunity to Tuberculin.**—Hamburger states that the artificially acquired immunity to large doses of tuberculin is in many cases merely the result of inability to react on account of the saturation with antibodies. He describes two convincing tests, one in a babe of twelve months with autopsy findings. The individual seems to be rendered immune, when in reality the lack of response is merely an inability to react.

88. **Serum Treatment of Surgical Tuberculosis.**—Strauss has tried the Marmorek serum in 37 cases of various tuberculous processes in the bones, glands or bladder. He found it harmless, and his general impression was favorable on the whole for its use in surgical tuberculosis.

90. **Serum Treatment of Meningitis.**—Orth has used a polyvalent serum in two cases of epidemic cerebrospinal meningitis, and gives tracings showing benefit from its administration. The injections were followed by an interval of general improvement during which the organism could reassemble its defenses. No complications have been observed in these cases during the fifteen months since.

91. **Giant Tumor of the Scalp.**—Klostermann reports the successful removal of a fibrosarcoma from the right side of the head. The growth measured 9x12x20 inches in circumference. It had evidently started as a cavernous angioma but had become malignant after the menopause.

94. **Dystrophy and Syringomyelia.**—Erb gives the details of about half a dozen cases of these affections differing in several respects from the classic types. In one case the progressive muscular dystrophy was confined to the legs and the affection had been erroneously differentiated by a number of prominent physicians, some ascribing the trouble to neurasthenia or tabes or compression of the spinal cord. The patient was a banker of 37. Erb in describing this case reiterates that only careful study of the history will protect the physician against serious error in these obscure cases. In another case the dystrophy was localized in the muscles in the back of the neck. Although of the juvenile form, the affection in this case commenced at the age of 50. In all his experience he had never witnessed a case of recovery from progressive muscular dystrophy and did not believe in its possibility until convinced of the contrary by a case in a girl of 7, and Marina has recently reported a similar case. In Erb's case the child presented a typical dystrophy of the juvenile form. The parents and brothers of the little patient are healthy. Systematic treatment was instituted and kept up for a long time: the galvanic current to the spinal cord in the neck with galvanofaradization of the muscles, gentle massage and exercise, iron, arsenic and cod liver oil, brine baths and fresh air, and the results were surprisingly good. In three years the child was entirely healthy and well grown with only a few traces of the former dystrophy. The last muscle to show traces of dystrophy, the deltoid, had developed normally, especially under the influence of swimming, and the child is now, six years later, practically cured.

Virchows Archiv, Berlin.

October, CXCIV, No. 1, pp. 1-176.

95 Interstitial Cells in the Testicles. (Zwischenzellen des Hodens.) K. Kasai.
96 Hypernephroma in Vulva as Only Metastasis of Malignant Hypernephroma. (Eine Nebennierengeschwulst der Vulva als einzige Metastase eines malignen Nebennierentumors der linken Seite.) E. Gräfenberg.
97 Secretory Functioning of Stomach Glands Under Abnormal Conditions of Innervation and Duct Arrangement. (Die sekretorische Funktion der Magendrüsen unter abnormen Bedingungen der Innervation und Kanalisation des Organs.) G. Di Cristina.
98 Peculiar Cells in the Tonsil of a Dog and Their Probable Significance. (Einige eigenartige Zellen in der Gaumentonsille eines Hundes.) G. Alagna.
99 Rudimentary Segments of Lung in Cattle. (Ueber rudimentäre Lungenabschnitte beim Rinde.) A. Glur.
100 *Experimental Hyperemic Treatment of Streptococcus Infection in Rabbit's Ear. (Experimente über Biersche Stauung bei Streptokokkeninfektion am Kaninchenohr.) C. Walther.
101 Action of Adrenalin Injected Subcutaneously. (Wirkung subkutan einverleibten Adrenalins.) E. Johannes.
102 Psammoma-like Growths in Wall of a Meningocele. (Psammomähnliche Bildungen in der Wand einer Meningocele.) P. Prym.
103 *Case of Fibroelastomyxoma of the Heart and Casuistic Study of Tumors of the Heart, Especially Myxomas. (Fall von Fibroelastomyxom des Herzens.) Karrenstein.
104 *Pathology and Anatomy of Scorbutus. T. Sato.

100. **Experimental Hyperemic Treatment.**—Walther reports extensive experimental research with Bier's constricting hyperemia applied to rabbits' ears. The results can not be considered as favorable, and his review of the literature has shown that streptococcus phlegmons are unusually resistant to this form of treatment. He took the streptococci from puerperal processes.

103. **Tumors of the Heart.**—Karrenstein has collected from the literature 39 cases of tumor of the heart, exclusive of myxomas, and 38 of the latter. The details of the various cases are given and a case of myxoma personally observed is reported in detail. His patient was a man of 56 and the myxoma was located in the left auricle. None of the cases on record allowed a clinical diagnosis during life. The myxomas were found in the left heart in 27 of the 38 cases. The secondary tumors were much more frequent in the right heart, but other primary tumors occur in about equal numbers left and right. These heart tumors have been discovered at all ages. The myxomas were located on the tricuspid valve in 29 per cent. of the cases, but other forms of tumors only in 7.7 per cent.

104. **Scorbutus.**—When Port Arthur capitulated in 1905, the Russian sick and wounded numbered about 17,000, and more than half of these suffered from scorbutus. On account of this remarkable opportunity for research on scorbutus, a commission of five physicians was appointed by the Japanese to study this disease and Sato and Nambu here publish the official report of the commission. It includes an account of experimental research.

Wiener klinische Wochenschrift.

October 15, XXI, No. 42, pp. 1435-1470.

105 Hemoglobinuria and Hemolysis. W. Czernecki.
106 *Lancinating Pains in Head in Tabes (Lanzinierende Schmerzen im Bereiche des Kopfes bei Tabes dorsalis.) A. Lang.
107 Checking of Phagocytosis in Reagent Glass by Culture Filtrates. (Behinderung der Reagenzglasphagozytose durch Kulturfiltrate.) S. O. Schöbl.
108 Research on Chicory. (Physiologische Versuche mit der Zichorie.) J. Zwintz.
109 Special Training for Social Medicine. (Die soziale Medizin als besonderer Unterrichtsgegenstand.) M. Sternberg.

October 22, No. 43, pp. 1471-1506.

110 *Address at Dedication of New Gynecologic Clinics at Vienna. (Bau, Einrichtung und Ziele der neuen Frauenkliniken.) F. Schauta. Id. A. v. Rosthorn.
111 Fifty Years of Gynecology at Vienna. (Fünfzig Jahre gynäkologische Klinik.) J. Fischer.
112 *Long Freedom from Recurrence After Incomplete Operation for Uterine Cancer. (Unerwartete Rezidivfreiheit nach unvollständiger Operation des Gebärmutterkrebses.) K. Fleischmann.

106. **Lancinating Pains in Head in Tabes.**—Lang calls attention to the pains resembling neuralgia which are liable to be encountered in incipient tabes. The pains follow the usual routes of neuralgia, but the nerve trunks are very little, if at all, sensitive to pressure, while severe sensory disturbances are generally evident. Another feature of this pseudoneuralgia is that the trigeminal and occipital nerves are generally affected simultaneously or alternately, which is rare in true neuralgia. Another means of differentiation is the inefficacy of ordinary treatment for neuralgia. His first patient was a woman of 46, who, nine years before, had suffered for weeks from intense left headache. After an interval of some years the headache returned in the left side and the trigeminal nerve was resected; as no improvement was observed, the Gasserian ganglion was taken out. The agonizing headache still continued in paroxysmal exacerbations, but pressure on the nerve trunk was nowhere painful, notwithstanding the intense pain in the trigeminal and occipital domain. Hypalgesia in the thorax and anomalous reflexes confirmed the final diagnosis of tabes. He describes further seven more cases, out of a much larger experience, all with these lancinating pains in the head as the first sign of tabes.

110. **Gynecology at Vienna.**—Schauta's address is accompanied by an interesting chart showing the mortality of the Maternity for the hundred years ending 1884. The curve shows the increasing mortality with the increasing anatomic tendency of medicine in the eighteenth century, especially when the material was used for teaching purposes. Then came Semmelweis, and the curve drops from its highest point nearly to its lowest; then the level drops lower still with Lister, and reaches its minimum with the construction of a new building in 1873. Rosthorn devoted most of his address to the clinical consideration of pain as a symptom. The parts of the sexual system covered with peritoneum are devoid of sensibility to pressure, warmth, cold and pain, and are refractory to stimuli, chemical, thermic and electric

—all this justifying the conclusion that in these parts it is innervated by the sympathetic alone. The uterus can frequently be extirpated without any anesthetic, with scarcely the slightest pain. Only considerable traction on the ligaments and severing the masses of connective tissue around the cervix, above the roof of the vagina, induce pain. The ovaries and tubes also can be cut and cauterized without the patient feeling pain. She notices the manipulations only when the pedicle of the ovary is pulled or ligated. Plastic operations on the vagina do not require even local anesthesia, if the orifice and the perineum are not involved. The sacral pain accompanying most gynecologic affections is undoubtedly a radiated pain, possibly explainable by Head's projection, but it occurs also in neurasthenics and hysterical patients free from gynecologic changes. It may also accompany displacement. It is important, he added, to classify the pain, and sometimes several days' observation are required for this, to study the factors which elicit the pain, intensify or attenuate it. Pain, he declares, confronts us in many forms like an all-conquering demon, and yet it is the friend of the sufferer, the watchdog of health. It compels the sufferer to seek help, and is thus the physician's most loyal ally.

112. **Freedom from Recurrence After Palliative Operation on Uterine Cancer.**—Fleischmann's first patient was a woman of 35 who is in good health eleven years after vaginal extirpation of the carcinomatous uterus, leaving a large part of the intestine involved in the growth. In two other cases the patients are still in good health ten and eight years after a similar incomplete vaginal operation. These cases confirm the view that it is possible for the organism to destroy or keep in a latent state a certain amount of cancer germs left behind.

Gazzetta degli Ospedali e delle Cliniche, Milan.

October 11, XXIX, No. 122, pp. 1289-1304.

113 Inoculability of Bacillus of Soft Chancre in Rabbit's Cornea. (Inoculabilita del bacillo di Ducrey nella cornea del coniglio.) A. Fontana.
114 Present Status of Treatment of Diphtheria, with Special Regard to Mechanism of Action of Antiserum. (Lo stato attuale delle terapia della forme crouposo-difteriche delle vie aeree.) M. Fasano.
115 Malta Fever and Syphilitic Liver Lesions. (Febbre mediterranea e sifilide epatica.) S. Lavagna.
116 Symmetrical Gangrene of the Legs in Infectious Diseases. (Gangrena simmetrica delle estremita nel decorso di malattie infettive.) G. Tomaselli.
117 Epidemic Pneumonia. (Polmonite epidemica.) T. Oreste.
118 Symptomatology and Diagnosis of Hydatidiform Mole. (Mola vescicolare.) G. Manara.

October 18, No. 125, pp. 1321-1336.

119 Study of Paget's Disease. One Case. (Carcinoma della mammella.) G. Volterrani.
120 *Experimental Study of Effects of Prolonged Use of Small Doses of Quinin. (Contributo alla profilassi della malaria.) A. Graziani.
121 Primary Sarcomas in the Muscles. (Considerazioni cliniche ed istologiche sui sarcomi muscolari primitivi.) P. Desteffani.
122 *Paroxysmal Tachycardia. A. De Blasi.

120. **Experimental Study of Quinin Prophylaxis.**—Graziani made a daily subcutaneous injection of quinin in rabbits and guinea-pigs in doses proportional to their weight corresponding to the dosage for quinin prophylaxis of malaria. The injections were kept up until the animals were fully grown, that is, for three months, and in adult animals for the same length of time. The quinin evidently checked the growth a little and rendered the animals less resistant to infections, but did not seem to alter the composition of the blood.

122. **Paroxysmal Tachycardia.**—One of De Blasi's two patients was a physician, and in both the attacks of heart disturbance were separated by intervals of complete health. The heart muscle seemed to be absolutely intact under the most careful examination. The neurosis is apparently the result of chronic gastrointestinal disturbances. The attacks are sometimes brought on by stooping to pick up something, and are arrested by reclining or by an ice bag to the heart, inhalation of amyl nitrite or injection of morphin. Holding the breath also helps.

Policlinico, Rome.

October 18, XV, Practical Section, No. 42, pp. 1317-1348.

123 Edinger's Theory of the Using-up of the Nerve Cells. (Teoria del consumo intorno alla genesi delle malattie del sistema nervoso.) V. Forli.

October 25, No. 43, pp. 1349-1380.

124 Magnesium Plates as Aid in Suturing Liver. (Nuovo processo di emostasi epatica con sostegni intraepatici di magnesio.) R. Caminiti.

October, Surgical Section, No. 10, pp. 425-472.

125 Chondroendothelioma of the Head. (Condro-endotelioma del capo.) A. Pennisi.

October, Medical Section, No. 10, pp. 433-476.

126 Apparatus for Automatic Registration of Foot Clonus. Persistence of Latter During Sleep. (Apparecchio per la registrazione automatica del clono del piede.) E. Levi.
127 Relations Between Human and Bovine Tuberculosis. (Le ricerche della Commissione inglese sulla tubercolosi e la questione del rapporto della tubercolosi dell 'uomo con quella dei bovini.) M. Jatta.
128 Cancer and Cirrhosis of the Liver with Neoplastic Infection of Nerves and Arteries. (Cancro cirrosi del fegato con infiltrazione neoplastica dei nervi e delle arterie.) A. Conti. Commenced in No. 9.

Ugeskrift for Læger, Copenhagen.

October 1, LXX, No. 40, pp. 1135-1156.

129 Diphtheria Epidemic at Sorø, 1908, and Serum Prophylaxis. H. Kaarsberg.

Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

THERAPEUTICS OF THE CIRCULATION. Eight Lectures Delivered in the Spring of 1905 in the Physiologic Laboratory of the University of London. By Lauder Brunton, Kt., M.D., D.Sc., LL.D. (Edin.), LL.D. (Aberd.), F.R.C.P., F.R.S., Consulting Physician to St. Bartholomew's Hospital. Cloth. Pp. 280, with illustrations. Price, $1.50. Philadelphia: P. Blakiston's Son & Co., 1908.

TICKS, A Monograph of the Ixodoidea. By George H. F. Nuttall, M.A., M.D., Ph.D., Sc.D., F.R.S., Quick Professor of Biology in University of Cambridge. Cecil Warburton, M.A., F.Z.S., Zoologist to Royal Agricultural Society. W. F. Cooper, B.A., F.Z.S., F.L.S., and L. E. Robinson, A.R.C.Sc. (Lond.). Paper. Pp. 104, with illustrations. Price, $1.25. Cambridge: University Press, 1908.

MEDICAL INSPECTION OF SCHOOLS. By Luther Halsey Gulick, M.D., Director of Physical Training, New York Public Schools, and Leonard P. Ayres, General Superintendent of Schools of Porto Rico, 1906-1908. Cloth. Pp. 276. Price, $1.00. New York: Charities Publication Committee (Russell Sage Foundation), 1908.

ARTERIOSCLEROSIS. By Louis M. Warfield, A.B., M.D., Instructor in Medicine, Washington University Medical Department. Introduction by W. S. Thayer, M.D., Professor of Clinical Medicine, Johns Hopkins University. Cloth. Pp. 165, with illustrations. Price, $2.00. St. Louis: G. V. Mosby Medical Book Co., 1908.

A MANUAL OF BACTERIOLOGY. By R. Tanner Hewlett, M.D., F.R.C.P., D.P.H. (Lond.), Professor of General Pathology and Bacteriology, King's College, London. Third Edition. Cloth. Pp. 638, with illustrations. Price, $4.20. Philadelphia: P. Blakiston's Son & Co., 1908.

LEHRBUCH INTERNER MEDIZIN. Von William Osler, Königlicher Professor der Medizin an der Universität Oxford. Uebersetzt von Edmund Hoke, I. Assistent der medizinischen Universitätsklinik in Prag. Paper. Pp. 879. Price, $3.00. Berlin: Urban & Schwarzenberg, 1909.

INDEX OF LEGISLATION 1907. Education Department Bulletin, New York State Library, Legislation 36. Edited by Frederick D. Bramhall, Legislative Reference Librarian. No. 435. Paper. Pp. 599. Albany: University of the State of New York, 1908.

GONORRHEA IN WOMEN. By Palmer Findley, M.D., Professor of Gynecology in College of Medicine of University of Nebraska, Omaha. Cloth. Pp. 112. Price, $2.00. St. Louis: C. V. Mosby Medical Book Co., 1908.

A HANDBOOK OF SUGGESTIVE THERAPEUTICS, APPLIED HYPNOTISM, PSYCHIC SCIENCE. By Henry S. Munro, M.D., Americus, Ga. Second Edition. Cloth. Pp. 360. Price, $3.00. St. Louis: C. V. Mosby, 1908.

POCKET DOSE BOOK. Compiled by John Edwin Rhodes, A.M., M.D., Associate Professor of Diseases of the Chest, Rush Medical College. Cloth. Price, $0.25. Chicago: Sharp & Smith, 1908.

THE ART OF NATURAL SLEEP. By Lyman P. Powell, Rector of St. John's Church, Northampton, Mass. Cloth. Pp. 92. Price, $0.90. New York: G. P. Putnam's Sons, 1908.

REPORT ON DEPARTMENT OF SCHOOL HYGIENE, Boston Public Schools. By Thomas F. Harrington, M.D., Director. Paper. Pp. 81. Boston: Municipal Printing Office, 1908.

PRACTICAL POINTS IN ANESTHESIA. By Frederick-Emil Neef, B.S., B.L., M.L., M.D., New York City. Cloth. Pp. 46. Price, $0.60. New York: Surgery Pub. Co., 1908.

HANDBUCH DER BIOCHEMIE DES MENSCHEN UND DER TIERE. Von Carl Oppenheimer, Ph.D., M.D. Paper. Pp. 306. Price, $1.25. Jena: Verlag von Gustav Fischer, 1908.

APPLIED PHYSIOLOGY. By Robert Hutchison, M.D., F.R.C.P., Physician to London Hospital. Cloth. Pp. 298. Price, $1.50. New York: Longmans, Green & Co., 1908.

REPORT OF THE SURGEON-GENERAL U. S. Army to the Secretary of War, 1908. Paper. Pp. 179. Washington: Government Printing Office, 1908.